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STOPPING
WATER POLLUTION
AT ITS SOURCE

MISA
Municipal/Industrial Strategy for Abatement

PRELIMINARY REPORT
ON THE FIRST SIX MONTHS OF
PROCESS EFFLUENT MONITORING
IN THE
MISA PULP AND PAPER SECTOR

(January 1, 1990 to June 30, 1990)

Environment
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MUNICIPAL-INDUSTRIAL STRATEGY FOR ABATEMENT
(MISA)

PRELIMINARY REPORT ON THE FIRST SIX MONTHS OF PROCESS EFFLUENT MONITORING IN THE MISA PULP AND PAPER SECTOR

(January 1, 1990 to June 30, 1990)

Report prepared by:

Water Resources Branch
Ontario Ministry of the Environment

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INTRODUCTION

The Municipal/Industrial Strategy for Abatement (MISA) program is a regulatory program designed to reduce water pollution from industrial and municipal dischargers in Ontario. The ultimate goal of the MISA program is the virtual elimination of persistent toxic contaminants from all discharges to Ontario waterways.

MISA Effluent monitoring regulations have been promulgated for nine industrial sectors. The Effluent Monitoring Regulations require direct dischargers to monitor the types, concentrations and total amounts of toxic substances present in their effluent.

This report is a preliminary report on the first six months of process effluent monitoring data for the MISA Pulp and Paper Sector. A final report will be prepared on the entire twelve months of effluent monitoring data once the data has been validated and reviewed for quality assurance/quality control.

I. BACKGROUND

There are twenty seven (27) pulp and paper mills located in the Province of Ontario that discharge effluent directly to surface watercourses. These mills have just completed one year of effluent monitoring under the MISA (Municipal Industrial Strategy for Abatement) program.

An Effluent Monitoring Regulation for the MISA Pulp and Paper Sector was promulgated on July 21, 1989. Under the Regulation, each pulp and paper mill was required to monitor its effluent for a one year period starting on January 1, 1990.

For the purposes of the effluent monitoring regulation, the twenty seven pulp and paper mills have been divided into four subcategories - sulphate (kraft), sulphite-mechanical, corrugating and deinking-board-fine papers-tissue.

There are nine mills in the sulphate (kraft) subcategory, eight mills in the sulphite-mechanical subcategory, two mills in the corrugating subcategory and the remaining mills are in the deinking-board-fine papers-tissue subcategory (see Appendix A). Pulp and paper mills were placed into a particular subcategory depending on the manufacturing processes used at the mill.

Note:

The Development Document for the Effluent Monitoring Regulation for the Pulp and Paper Sector (Ontario Ministry of the Environment, July 1989) outlines the technical rationale behind the development of the Pulp and Paper Sector Effluent Monitoring Regulation. The Development Document provides background information on the different options that were considered in determining the monitoring approach to be used for mills in the MISA Pulp and Paper Sector. Background information is also provided on the technical rationale used to select the parameters to be monitored and the frequency of monitoring.

II. PRESENT STATUS OF EFFLUENT MONITORING

The MISA Pulp and Paper Sector completed its twelfth and final month of effluent monitoring under the MISA Effluent Monitoring Regulation for the Pulp and Paper Sector on December 31, 1990.

Effluent monitoring data is reported to the Ministry within sixty or ninety days after the day on which the sample was collected depending upon the type of analysis. Therefore, the Ministry database presently contains approximately nine months of effluent monitoring data. Data validation has been completed for the first six months of data.

III. QUANTITY OF ANALYTICAL DATA

The first six months of effluent monitoring data for the MISA Pulp and Paper Sector contains 73,254 data points. Approximately ninety percent of these data points are for process effluent streams (see table below).

Data Point Type	Number of Data Points
Process Effluent	64,749
Cooling Water	2,053
Backwash Effluent	101
Stormwater	1,080
Waste Disposal Site Effluent	384
Emergency Overflow Effluent	601
Quality Control	4,286
Total	73,254

Data provided in this report reflects the Ministry database as of November 19, 1990. There is some data that is denoted as 'missing data' in this report. This data was received late and will be included in the second and final report on the effluent monitoring data for the MISA Pulp and Paper Sector.

IV. THE PRELIMINARY REPORT ON THE FIRST SIX MONTHS OF PROCESS EFFLUENT MONITORING IN THE MISA PULP AND PAPER SECTOR

This preliminary report presents the first six months of process effluent monitoring data for the MISA Pulp and Paper Sector. A final report will be prepared on the entire twelve months of process effluent monitoring data. This report will also include cooling water, backwash effluent, stormwater, waste disposal site effluent, emergency overflow effluent and quality control data.

It should be noted that any interpretations of the results reported at this stage can only be considered as "preliminary" in nature.

In order to expedite the reporting of MISA effluent monitoring data, the following assumptions have been made for the preparation of this report:

1. **All analytical results with remark codes "<DL", "<T", "<W" and "<WE" are assigned the value of zero (0) i.e. non detected (approximately 25% of the data). Remark codes are listed in Appendix B of this Report.**

2. **All analytical results with remark codes "<", ">", "A" or analytical results that do not have a remark code are included in the results presented in this report.**

3. **All other data with remark codes different than the ones mentioned above are not included in the data used to prepare this report because the results are questionable (approximately 2.7% of the data).**

4. **Quality control and audit data are not considered in this review of the data.**

5. **Monthly average concentrations are calculated as the arithmetic mean of the daily concentrations.**

6. **Daily loadings are calculated as the product of daily flow and concentration.**

7. **Monthly average loadings are calculated as the arithmetic mean of the daily loadings.**

8. **For pulp and paper mills that have two process effluent streams (i.e. Abitibi-Price Inc., Fort William Division and MacMillan Bloedel), monthly average concentrations are reported for each effluent stream.**

9. **For pulp and paper mills that have two process effluent streams (i.e. Abitibi-Price Inc., Fort William Division and MacMillan Bloedel), monthly average loadings are reported for each mill by calculating the sum of the monthly average loadings for each effluent stream.**

V. PROCESS EFFLUENT MONITORING DATA

Tables 1.1 to 1.4 list the parameters that have been detected, by process subcategory, in MISA pulp and paper sector process effluent and their frequency of detection and average concentrations. These parameters have been detected above the laboratory method detection limit.

It should be noted that Tables 1.1 to 1.4 list the parameters that have been detected on a process subcategory basis and not on an individual mill basis.

Tables 2.1 to 2.27 list the parameters that have been detected in the process effluent streams at each mill on a mill by mill basis.

Tables 3.1 and 3.2 list the monthly average process effluent flows for the twenty seven pulp and paper mills in the sector. The Kimberly-Clark Canada mill in Huntsville spray irrigates effluent during the summer and only discharges effluent during the colder months of the year. Therefore, only four months of effluent monitoring data (including flow measurement data) are reported for this mill in this report.

Table 4.0 lists the average daily loadings of parameters that were monitored daily, thrice weekly and weekly. Some of the mills monitored the parameters ammonia plus ammonium, nitrate and nitrite, total Kjeldahl nitrogen and phosphorus monthly. These averages have also been included in the table. The average daily loadings of adsorbable organic halogen (AOX) are listed for those mills that bleach some of their product using chlorine and chlorine derivatives. AOX is a surrogate parameter that is used to measure organochlorine compounds.

Under the effluent monitoring regulation, pulp and paper mills were permitted to monitor for either chemical oxygen demand (COD) or dissolved organic carbon (DOC) on a daily basis. As a result, Table 4.0 lists the average daily loadings of either COD or DOC for each mill.

Dichlorodehydroabietic acid and dehydroabietic acid are fatty and resin acids. Sulphate (kraft) mills were required to monitor dichlorodehydroabietic acid and dehydroabietic acid thrice weekly. Sulphite-mechanical and corrugating mills were only required to monitor dehydroabietic acid.

Volatile suspended solids were monitored at mills that have biological treatment systems. Volatile suspended solids were measured in order to determine if there are significant discharges of bio-solids at these mills.

Figures 1.1 to 1.27 show the monthly average concentrations of the daily, thrice weekly and weekly parameters for each mill by parameter and process subcategory.

Figures 2.1 to 2.44 show the monthly average loadings of the daily, thrice weekly and weekly parameters for each mill by parameter and process subcategory.

Figures 3.1 to 3.8 show the monthly average production based loadings of 5-day biological oxygen demand and total suspended solids for each mill by process subcategory. Production based loadings of 5-day biological oxygen demand and total suspended solids were calculated using total monthly average production data for each mill.

Figure 3.9 shows the monthly average production based loadings of adsorbable organic halide for each mill in the sulphate (kraft) process subcategory. Production based loadings of adsorbable organic halide were calculated using bleached kraft pulp monthly average production data for each mill.

VI CURRENT STATUS OF THE MISA PULP AND PAPER SECTOR

While the data gathering exercise continues, the Ministry will review the first six months of effluent monitoring data for quality assurance/ quality control (QA/QC). This data will be used to select a preliminary list of candidate parameters for control. The Ministry will use this list during the initial stages of Best Available Technology (BAT) identification.

Validation of the effluent monitoring data will continue. When the entire twelve months of effluent monitoring data have been validated and reviewed for quality assurance/quality control, the Ministry will prepare a second and final report on the effluent monitoring data for the MISA Pulp and Paper Sector. A final list of candidate parameters for control will be developed. These parameters will be then be used in the development of effluent limits for the MISA Pulp and Paper Sector.

TABLE 1.1
PRIORITY POLLUTANTS DETECTED IN THE SULPHATE (KRAFT) SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Adsorbable Organic Halide	687	100	.14	461.05	21.75	mg/L
Aluminum	245	100	3.83	6,840.00	1,834.52	ug/L
BOD, 5 day, Total Demand	699	100	.00	498.00	131.14	mg/L
COD	1427	100	20.00	3,840.00	644.94	mg/L
Chloroform	52	100	6.90	1,757.60	437.71	ug/L
DOC	175	100	4.55	181.00	119.86	mg/L
Hydrogen ion (pH)	1600	100	2.30	10.82	6.63	
Specific conductance	1601	100	33.00	4,200.00	1,570.32	usiem/cm
Total phosphorus	124	100	.20	2.40	.84	mg/L
Total suspended solids	1600	100	3.00	404.80	65.00	mg/L
Total Kjeldahl nitrogen	145	99	.00	16.65	3.84	mg/L
VSS	102	99	.00	220.00	62.55	mg/L
Zinc	243	97	.00	490.00	99.50	ug/L
Sulphide	52	96	.00	10.50	.49	mg/L
Ammonia plus Ammonium	145	87	.00	3.51	.61	mg/L
Dehydroabietic Acid	679	85	.00	6.60	.47	mg/L
Chromium	47	72	.00	300.00	40.55	ug/L
Chlorodehydroabietic Acid	53	68	.00	.81	.09	mg/L
Isopimaric Acid	53	68	.00	2.52	.14	mg/L
Total TCDF	54	67	.00	1.60	.14	ng/L
Dichlorodehydroabietic Ac.	679	66	.00	.72	.06	mg/L
Pimaric Acid	53	66	.00	.41	.04	mg/L
Abietic Acid	53	64	.00	2.27	.23	mg/L
Copper	53	64	.00	290.00	18.79	ug/L
Oleic Acid	53	64	.00	.43	.08	mg/L
Nitrate+Nitrite	145	63	.00	37.20	.61	mg/L
Neoabietic Acid	53	60	.00	4.50	.19	mg/L
Octachlorodibenzo-p-dioxin	54	54	.00	1.90	.20	ng/L
2,4,6-Trichlorophenol	53	51	.00	27.00	4.56	ug/L
2,4-Dichlorophenol	53	51	.00	8.10	2.08	ug/L
Vanadium	53	51	.00	70.00	8.39	ug/L
Toluene	52	48	.00	35.80	3.62	ug/L
Phenol	53	47	.00	186.00	19.20	ug/L
Molybdenum	53	45	.00	60.00	7.92	ug/L
Nickel	53	43	.00	160.00	11.09	ug/L
2,4,5-Trichlorotoluene	52	35	.00	1.41	.15	ug/L
Levopimaric Acid	43	35	.00	.09	.01	mg/L
Camphene	53	34	.00	85.00	5.36	ug/L
Mercury	52	33	.00	3.40	.09	ug/L
Thallium	53	32	.00	40.00	9.08	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.1 (continued)
PRIORITY POLLUTANTS DETECTED IN THE SULPHATE (KRAFT) SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
o-Cresol	53	32	.00	12.00	1.59	ug/L
Hexachlorobenzene	53	30	.00	2.21	.15	ug/L
Hexachlorocyclopentadiene	53	30	.00	.34	.02	ug/L
Lead	53	30	.00	80.00	6.58	ug/L
m-Cresol	51	29	.00	79.00	5.24	ug/L
Cadmium	53	28	.00	4.00	.62	ug/L
1,2,3-Trichlorobenzene	53	26	.00	3.05	.22	ug/L
Hexachlorobutadiene	50	26	.00	.16	.01	ug/L
Benzene	52	25	.00	12.50	1.35	ug/L
Octachlorostyrene	52	25	.00	.99	.04	ug/L
1,2,4-Trichlorobenzene	53	23	.00	.98	.05	ug/L
2,3,5-Trichlorophenol	53	23	.00	19.80	2.05	ug/L
Methylene chloride	52	23	.00	400.00	24.26	ug/L
Pentachlorobenzene	53	23	.00	1.26	.09	ug/L
Styrene	52	23	.00	14.40	.86	ug/L
Beryllium	53	21	.00	12.00	1.16	ug/L
Cobalt	53	21	.00	22.00	3.58	ug/L
Hexachloroethane	53	21	.00	.14	.01	ug/L
1,2,4,5-Tetrachlorobenzene	46	20	.00	.30	.02	ug/L
Total H7CDD	54	19	.00	.75	.02	ng/L
Total PCDF	54	19	.00	1.20	.04	ng/L
Total TCDD	54	19	.00	.79	.03	ng/L
p-Cresol	49	18	.00	13.00	.77	ug/L
Naphthalene	53	17	.00	8.60	.52	ug/L
m-Xylene and p-Xylene	52	17	.00	19.20	.66	ug/L
1,2,3,4-Tetrachlorobenzene	53	15	.00	.37	.02	ug/L
Phenanthrene	53	15	.00	19.90	1.13	ug/L
2,3,4,5-Tetrachlorophenol	49	14	.00	2.60	.17	ug/L
PCBT	8	13	.00	.26	.03	ug/L
Silver	53	13	.00	10.00	.81	ug/L
Fluoranthene	53	11	.00	9.00	.42	ug/L
Pentachlorophenol	53	11	.00	2.70	.17	ug/L
Total PCDD	54	11	.00	.09	.00	ng/L
Bromomethane	52	10	.00	390.00	9.42	ug/L
Chloromethane	52	10	.00	1,100.00	21.99	ug/L
1,2,3,5-Tetrachlorobenzene	46	9	.00	1.00	.03	ug/L
2,3,5,6-Tetrachlorophenol	53	9	.00	6.20	.27	ug/L
2,4-Dimethylphenol	53	9	.00	4.80	.24	ug/L
Indole	53	9	.00	6.20	.30	ug/L
Pyrene	53	9	.00	6.60	.25	ug/L
Total H6CDF	54	9	.00	.31	.01	ng/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.1 (continued)
PRIORITY POLLUTANTS DETECTED IN THE SULPHATE (KRAFT) SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4,5-Trichlorophenol	53	8	.00	12.00	.62	ug/L
Bromodichloromethane	51	8	.00	6.60	.26	ug/L
Octachlorodibenzofuran	54	7	.00	.16	.01	ng/L
Total H6CDD	54	7	.00	.27	.01	ng/L
1,1-Dichloroethylene	52	6	.00	14.40	.36	ug/L
2,3,7,8 TCDD	54	6	.00	.08	.00	ng/L
2-Chlorophenol	53	6	.00	2.20	.06	ug/L
4-Chloro-3-methylphenol	53	6	.00	9.20	.19	ug/L
Acenaphthylene	53	6	.00	5.40	.22	ug/L
Total H7CDF	54	6	.00	.17	.01	ng/L
o-Xylene	52	6	.00	16.80	.39	ug/L
1,1,2,2-Tetrachloroethane	52	4	.00	14.40	.36	ug/L
1,2-Dichlorobenzene	52	4	.00	15.60	.34	ug/L
1,4-Dichlorobenzene	52	4	.00	9.60	.19	ug/L
2,3,4-Trichlorophenol	53	4	.00	28.00	.75	ug/L
2,4-Dinitrophenol	53	4	.00	1.80	.04	ug/L
2-Methylnaphthalene	53	4	.00	2.90	.06	ug/L
Bromoform	52	4	.00	340.00	6.79	ug/L
Chlorobenzene	52	4	.00	24.00	.51	ug/L
Chrysene	53	4	.00	1.70	.05	ug/L
Trichlorofluoromethane	52	4	.00	12.00	.27	ug/L
1,1,2-Trichloroethane	52	2	.00	22.80	.44	ug/L
1,1-Dichloroethane	52	2	.00	20.40	.39	ug/L
1,2-Dichloroethane	52	2	.00	16.80	.32	ug/L
1,2-Dichloropropane	52	2	.00	21.60	.42	ug/L
1,3-Dichlorobenzene	52	2	.00	13.20	.25	ug/L
2,3,4,6-Tetrachlorophenol	47	2	.00	1.80	.04	ug/L
4-Nitrophenol	53	2	.00	1.80	.03	ug/L
Acenaphthene	53	2	.00	.80	.02	ug/L
Anthracene	53	2	.00	1.60	.03	ug/L
Benz(a)anthracene	53	2	.00	.90	.02	ug/L
Carbon tetrachloride	52	2	.00	12.00	.23	ug/L
Cis-1,3-Dichloropropylene	52	2	.00	27.60	.53	ug/L
Dibromochloromethane	52	2	.00	16.80	.32	ug/L
Ethylene dibromide	52	2	.00	22.80	.44	ug/L
Tetrachloroethylene	52	2	.00	190.00	3.65	ug/L
Trans-1,2-Dichloroethylene	52	2	.00	16.80	.32	ug/L
Trans-1,3-Dichloropropylene	52	2	.00	44.00	.85	ug/L
Trichloroethylene	52	2	.00	12.00	.23	ug/L
Vinyl chloride	52	2	.00	116.00	2.23	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.2
PRIORITY POLLUTANTS DETECTED IN THE SULPHITE-MECHANICAL SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
BOD, 5 day, Total Demand	682	100	8.00	1,207.00	470.41	mg/L
COD	534	100	120.00	2,812.00	1,258.86	mg/L
Conductivity, everage	180	100	138.00	421.00	264.57	usiem/cm
Conductivity, maximum	180	100	250.00	1,000.00	573.58	usiem/cm
Conductivity, minimum	180	100	.00	330.00	188.72	usiem/cm
DOC	1052	100	.87	1,140.00	398.09	mg/L
Hydrogen ion (pH)	1590	100	3.62	11.27	6.11	
Specific conductance	1413	100	.14	1,391.00	637.35	usiem/cm
Total Kjeldahl nitrogen	72	100	.23	17.20	2.69	mg/L
Total suspended solids	1590	100	.00	606.00	83.93	mg/L
VSS	25	100	18.00	73.00	37.48	mg/L
Aluminum	229	99	.00	6,900.00	1,311.87	ug/L
Total phosphorus	72	99	.00	2.00	.44	mg/L
Zinc	229	99	.00	430.00	95.93	ug/L
Nitrate+Nitrite	72	94	.00	1.04	.20	mg/L
Dehydroabietic Acid	675	92	.00	12.00	2.48	mg/L
Ammonia plus Ammonium	72	88	.00	3.60	.44	mg/L
Abietic Acid	54	85	.00	9.70	2.04	mg/L
Isopimaric Acid	54	85	.00	9.71	1.75	mg/L
Chloroform	54	83	.00	68.00	8.78	ug/L
Toluene	54	78	.00	31.00	3.42	ug/L
Copper	53	77	.00	290.00	31.51	ug/L
Pimaric Acid	54	76	.00	3.10	.33	mg/L
Octachlorodibenzo-p-dioxin	21	71	.00	14.00	.84	ng/L
Neoabietic Acid	54	69	.00	3.26	.54	mg/L
Oleic Acid	54	67	.00	2.62	.18	mg/L
Phenol	52	63	.00	67.00	7.35	ug/L
Levopimaric Acid	47	55	.00	2.50	.24	mg/L
Methylene chloride	54	50	.00	93.00	6.44	ug/L
Cadmium	53	47	.00	8.00	.46	ug/L
Lead	53	45	.00	70.00	5.88	ug/L
Vanedium	53	45	.00	170.00	10.30	ug/L
m-Cresol	52	44	.00	37.00	3.29	ug/L
Chromium	53	43	.00	84.20	7.15	ug/L
p-Cresol	51	39	.00	82.00	6.00	ug/L
m-Xylene and p-Xylene	54	37	.00	55.00	1.23	ug/L
Camphene	53	34	.00	32.65	2.14	ug/L
Chlorodehydroabietic Acid	54	31	.00	.36	.02	mg/L
o-Xylene	54	31	.00	19.20	.48	ug/L
Benzene	54	30	.00	6.40	.72	ug/L
Chloromethane	53	25	.00	88.00	5.52	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.2 (continued)
PRIORITY POLLUTANTS DETECTED IN THE SULPHITE-MECHANICAL SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Nickel	53	25	.00	26.00	2.53	ug/L
Bromomethane	54	22	.00	26.00	1.53	ug/L
1,2,4-Trichlorobenzene	53	21	.00	.16	.01	ug/L
Hexachlorobenzene	53	21	.00	.03	.00	ug/L
Naphthalene	53	21	.00	4.00	.28	ug/L
Octachlorodibenzofuran	21	19	.00	3.00	.15	ng/L
Styrene	54	19	.00	1.28	.14	ug/L
2,4,5-Trichlorotoluene	53	15	.00	.70	.03	ug/L
4-Nitrophenol	52	13	.00	36.00	2.69	ug/L
1,2,3-Trichlorobenzene	53	11	.00	.13	.01	ug/L
Hexachlorocyclopentadiene	53	11	.00	.05	.00	ug/L
o-Cresol	52	10	.00	4.00	.15	ug/L
1,2,3,4-Tetrachlorobenzene	53	9	.00	.02	.00	ug/L
Mercury	53	8	.00	.45	.01	ug/L
2,4,6-Trichlorophenol	52	6	.00	1.48	.06	ug/L
2-Methylnaphthalene	53	6	.00	.90	.03	ug/L
Beryllium	53	6	.00	2.20	.12	ug/L
Indole	53	6	.00	3.30	.09	ug/L
Molybdenum	53	6	.00	5.00	.20	ug/L
Pentachlorobenzene	53	6	.00	.04	.00	ug/L
Thallium	53	6	.00	30.00	1.23	ug/L
Total H6CDD	21	5	.00	.47	.02	ng/L
Total H6CDF	21	5	.00	1.10	.05	ng/L
Total H7CDD	21	5	.00	4.60	.22	ng/L
Total H7CDF	21	5	.00	3.70	.18	ng/L
Total PCDF	21	5	.00	.06	.00	ng/L
Total TCDF	21	5	.00	.21	.01	ng/L
1,1-Dichloroethane	54	4	.00	1.10	.02	ug/L
1-Methylnaphthalene	53	4	.00	.90	.02	ug/L
2,4-Dichlorophenol	52	4	.00	1.70	.04	ug/L
2,4-Dimethylphenol	52	4	.00	21.20	.42	ug/L
Bromodichloromethane	54	4	.00	6.60	.13	ug/L
Chlorobenzene	54	4	.00	.28	.01	ug/L
Phenanthrene	53	4	.00	1.00	.03	ug/L
Silver	53	4	.00	5.00	.17	ug/L
1,1,2,2-Tetrachloroethane	54	2	.00	.32	.01	ug/L
1,1,2-Trichloroethane	54	2	.00	.21	.00	ug/L
1,1-Dichloroethylene	54	2	.00	.32	.01	ug/L
1,2,4,5-Tetrachlorobenzene	51	2	.00	.01	.00	ug/L
1,2-Dichlorobenzene	54	2	.00	.24	.00	ug/L
1,2-Dichloroethane	54	2	.00	.82	.02	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.2 (continued)
PRIORITY POLLUTANTS DETECTED IN THE SULPHITE-MECHANICAL SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2-Dichloropropane	54	2	.00	.20	.00	ug/L
1,3-Dichlorobenzene	54	2	.00	.23	.00	ug/L
1,4-Dichlorobenzene	54	2	.00	.22	.00	ug/L
Acenaphthene	53	2	.00	1.10	.02	ug/L
Acenaphthylene	53	2	.00	2.40	.05	ug/L
Bromoform	54	2	.00	.49	.01	ug/L
Carbon tetrachloride	54	2	.00	1.03	.02	ug/L
Cis-1,3-Dichloropropylene	54	2	.00	.27	.01	ug/L
Dibromochlorometbane	54	2	.00	.24	.00	ug/L
Ethylene dibromide	54	2	.00	.18	.00	ug/L
Fluoranthene	53	2	.00	.50	.01	ug/L
Fluorene	53	2	.00	.25	.00	ug/L
Hexachlorobutadiene	53	2	.00	.03	.00	ug/L
Hexachloroethane	53	2	.00	.04	.00	ug/L
Octachlorostyrene	53	2	.00	.01	.00	ug/L
Pyrene	53	2	.00	.40	.01	ug/L
Tetrachloroethylene	54	2	.00	.21	.00	ug/L
Trans-1,2-Dichloroethylene	54	2	.00	.20	.00	ug/L
Trans-1,3-Dichloropropylene	54	2	.00	.10	.00	ug/L
Trichloroethylene	54	2	.00	.92	.02	ug/L
Trichlorofluoromethane	54	2	.00	.26	.00	ug/L
Vinyl chloride	54	2	.00	.74	.01	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.3
PRIORITY POLLUTANTS DETECTED IN THE CORRUGATING SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Aluminum	78	100	20.00	5,340.00	1,899.10	ug/L
BOD, 5 day, Total Demand	231	100	255.00	5,280.00	2,254.84	mg/L
COD	177	100	1,142.00	5,616.00	2,565.44	mg/L
DOC	353	100	469.00	6,500.00	2,696.76	mg/L
Hydrogen ion (pH)	530	100	4.11	9.93	6.11	
Nitrate+Nitrite	19	100	.28	630.80	204.45	mg/L
Octachlorodibenzo-p-dioxin	1	100	150.00	150.00	150.00	ng/L
Octachlorodibenzofuran	1	100	.84	.84	.84	ng/L
Specific conductance	530	100	360.00	4,210.00	1,601.46	usiem/cm
Total H6CDD	1	100	.30	.30	.30	ng/L
Total H6CDF	1	100	.14	.14	.14	ng/L
Total H7CDD	1	100	1.20	1.20	1.20	ng/L
Total H7CDF	1	100	.29	.29	.29	ng/L
Total TCDF	1	100	.07	.07	.07	ng/L
Total phosphorus	19	100	.14	3.07	1.64	mg/L
Total suspended solids	530	100	22.00	625.00	175.02	mg/L
VSS	1	100	253.00	253.00	253.00	mg/L
Zinc	78	100	90.00	1,631.00	462.63	ug/L
Total Kjeldahl nitrogen	19	95	.00	52.45	18.00	mg/L
Isopimaric Acid	18	83	.00	3.84	.68	mg/L
Dehydroabietic Acid	232	81	.00	3.19	.50	mg/L
Cadmium	18	78	.00	140.00	28.04	ug/L
Copper	18	78	.00	140.00	43.89	ug/L
Nickel	18	78	.00	100.00	31.44	ug/L
Oleic Acid	18	72	.00	3.39	.41	mg/L
Pimaric Acid	18	72	.00	.30	.10	mg/L
Chromium	18	67	.00	68.00	23.44	ug/L
Ammonia plus Ammonium	19	63	.00	27.30	5.90	mg/L
Vanadium	18	61	.00	180.00	44.17	ug/L
Phenol	18	56	.00	1,390.00	309.94	ug/L
Chlorodehydroabietic Acid	18	50	.00	.58	.08	mg/L
Lead	18	50	.00	130.00	36.17	ug/L
Levopimaric Acid	12	50	.00	3.94	.54	mg/L
Abietic Acid	18	44	.00	.98	.21	mg/L
Cobalt	18	44	.00	70.00	19.17	ug/L
Benzene	18	33	.00	39.00	4.04	ug/L
Silver	18	33	.00	140.00	16.22	ug/L
o-Cresol	18	33	.00	14.20	4.03	ug/L
Neoabietic Acid	18	22	.00	2.65	.22	mg/L
Toluene	18	22	.00	120.00	7.79	ug/L
Chloroform	18	17	.00	4.30	.35	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.3 (continued)
PRIORITY POLLUTANTS DETECTED IN THE CORRUGATING SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Mercury	18	17	.00	1.73	.15	ug/L
Molybdenum	18	11	.00	40.00	3.89	ug/L
Thallium	18	11	.00	70.00	5.00	ug/L
1,2,3-Trichlorobenzene	18	6	.00	.01	.00	ug/L
1,2,4-Trichlorobenzene	18	6	.00	.01	.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.4

PRIORITY POLLUTANTS DETECTED IN DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Adsorbable Organic Halide	5	100	1.24	20.40	5.61	mg/L
BOD, 5 day, Total Demand	685	100	.70	800.00	153.64	mg/L
COD	957	100	22.00	34,000.00	627.30	mg/L
DOC	319	100	5.60	148.00	76.78	mg/L
Hydrogen ion (pH)	1135	100	4.70	11.14	6.98	
Specific conductance	1289	100	98.00	1,410.00	565.91	usiem/cm
Total Kjeldahl nitrogen	83	100	.54	14.50	4.94	mg/L
Total phosphorus	64	100	.01	.70	.28	mg/L
VSS	26	100	6.00	92.00	55.62	mg/L
Ammonia plus Ammonium	83	96	.00	2.70	.35	mg/L
Aluminum	188	95	.00	18,300.00	2,153.02	ug/L
Nitrate+Nitrite	83	87	.00	.97	.26	mg/L
Dehydroabietic Acid	43	86	.00	3.60	.46	mg/L
Total suspended solids	1135	86	.00	909.00	55.88	mg/L
Zinc	186	85	.00	9,290.00	151.57	ug/L
Chloroform	45	78	.00	190.00	12.53	ug/L
Copper	45	76	.00	35.00	9.91	ug/L
Toluene	45	73	.00	14.10	1.96	ug/L
m-Xylene and p-Xylene	45	64	.00	6.40	.89	ug/L
Phenol	43	60	.00	178.00	13.23	ug/L
Vanadium	45	58	.00	55.00	7.89	ug/L
Abietic Acid	43	56	.00	.35	.06	mg/L
Cadmium	45	56	.00	3.00	.56	ug/L
Octachlorodibenzo-p-dioxin	13	54	.00	.57	.12	ng/L
Chromium	45	51	.00	182.00	12.04	ug/L
Isopimaric Acid	43	51	.00	.34	.03	mg/L
o-Xylene	45	51	.00	3.05	.36	ug/L
Nickel	45	49	.00	25.00	4.92	ug/L
Lead	45	44	.00	40.00	5.31	ug/L
1,2,4-Trichlorobenzene	44	43	.00	.06	.01	ug/L
Methylene chloride	45	42	.00	47.00	3.74	ug/L
Bromomethane	45	36	.00	68.00	3.88	ug/L
Pimaric Acid	43	35	.00	.36	.02	mg/L
Benzene	45	33	.00	8.80	.82	ug/L
m-Cresol	43	33	.00	40.00	2.63	ug/L
1,1-Dichloroethane	45	31	.00	2.70	.28	ug/L
Naphthalene	44	30	.00	12.20	1.07	ug/L
p-Cresol	43	30	.00	65.00	5.05	ug/L
1,1-Dichloroethylene	45	29	.00	55.00	3.34	ug/L
Chloromethane	45	29	.00	33.00	4.69	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.4 (continued)
PRIORITY POLLUTANTS DETECTED IN DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Molybdenum	45	27	.00	26.00	3.10	ug/L
Tetrachloroethylene	45	24	.00	8.60	.46	ug/L
Oleic Acid	42	17	.00	.20	.01	mg/L
1,2,3-Trichlorobenzene	44	16	.00	.01	.00	ug/L
Hexachlorocyclopentadiene	44	16	.00	.41	.03	ug/L
Levopimeric Acid	43	16	.00	.40	.02	mg/L
Styrene	45	16	.00	.73	.06	ug/L
Trichloroethylene	45	16	.00	33.30	1.53	ug/L
1,2,3,4-Tetrachlorobenzene	44	14	.00	.02	.00	ug/L
2,4,5-Trichlorotoluene	44	14	.00	.01	.00	ug/L
2-Methylnaphthalene	44	14	.00	9.20	.47	ug/L
Bromodichloromethane	45	13	.00	6.30	.58	ug/L
Dibromochloromethane	45	13	.00	1.27	.11	ug/L
Octachlorodibenzofuran	15	13	.00	.18	.02	ng/L
Chlorodehydroabietic Acid	43	12	.00	.04	.00	mg/L
Neoabietic Acid	43	12	.00	.04	.00	mg/L
1,4-Dichlorobenzene	45	11	.00	1.71	.06	ug/L
Indole	44	9	.00	4.00	.24	ug/L
Mercury	45	9	.00	.30	.01	ug/L
o-Cresol	43	9	.00	1.43	.08	ug/L
Total H7CDD	13	8	.00	.07	.01	ng/L
1-Methylnaphthalene	44	7	.00	16.60	.43	ug/L
4-Chloro-3-methylphenol	43	7	.00	.44	.03	ug/L
Cobalt	45	7	.00	22.00	.80	ug/L
Pentachlorophenol	43	7	.00	3.50	.22	ug/L
Total H6CDD	14	7	.00	.03	.00	ng/L
Total PCDD	14	7	.00	.03	.00	ng/L
Total TCDD	16	6	.00	.04	.00	ng/L
Total TCDF	16	6	.00	.02	.00	ng/L
2,4,6-Trichlorophenol	43	5	.00	1.00	.03	ug/L
Hexachlorobutadiene	44	5	.00	.05	.00	ug/L
Hexachloroethane	44	5	.00	.01	.00	ug/L
Pentachlorobenzene	44	5	.00	.01	.00	ug/L
Phenanthrene	44	5	.00	1.39	.06	ug/L
1,2-Dichloroethane	45	4	.00	.28	.01	ug/L
1,2-Dichloropropane	45	4	.00	.45	.01	ug/L
1,3-Dichlorobenzene	45	4	.00	.29	.01	ug/L
Beryllium	45	4	.00	20.00	.71	ug/L
Silver	45	4	.00	10.00	.29	ug/L
Thallium	45	4	.00	28.00	.89	ug/L
Trichlorofluoromethane	45	4	.00	2.90	.10	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 1.4 (continued)
PRIORITY POLLUTANTS DETECTED IN THE DEINKING-BOARD-FINE PAPERS-TISSUE SUBCATEGORY PROCESS EFFLUENT

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2-Dichlorobenzene	45	2	.00	.53	.01	ug/L
2,4-Dimethylphenol	43	2	.00	3.50	.08	ug/L
5-nitro, Acenaphthene	44	2	.00	5.30	.12	ug/L
Benzo(a)pyrene	44	2	.00	1.76	.04	ug/L
Camphene	44	2	.00	12.70	.29	ug/L
Chlorobenzene	45	2	.00	.28	.01	ug/L
Fluorene	44	2	.00	1.60	.04	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.1
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	2.10	4.40	3.10	mg/L
Aluminum	26	100	1,360.00	5,500.00	3,180.00	ug/L
Ammonia plus Ammonium	6	100	.08	.17	.13	mg/L
BOD, 5 day, Total Demand	78	100	227.00	1,207.00	897.58	mg/L
Chloroform	6	100	9.90	68.00	24.25	ug/L
Copper	6	100	17.00	113.00	37.83	ug/L
DOC	181	100	139.00	1,140.00	793.97	mg/L
Dehydroabietic Acid	78	100	.45	6.40	3.97	mg/L
Hydrogen ion (pH)	181	100	3.84	11.27	5.09	
Neoabietic Acid	6	100	.13	.84	.40	mg/L
Nitrate+Nitrite	6	100	.07	.36	.23	mg/L
Octachlorodibenzo-p-dioxin	1	100	.25	.25	.25	ng/L
Octachlorodibenzofuran	1	100	.05	.05	.05	ng/L
Specific conductance	181	100	309.00	1,390.00	1,133.08	usiem/cm
Toluene	6	100	.24	.82	.55	ug/L
Total Kjeldahl nitrogen	6	100	2.80	3.70	3.10	mg/L
Total phosphorus	6	100	.47	.66	.52	mg/L
Total suspended solids	181	100	44.00	384.00	122.29	mg/L
Zinc	26	100	.10	430.00	149.35	ug/L
Isopimaric Acid	6	83	.00	4.10	2.39	mg/L
Levopimaric Acid	6	83	.00	.76	.29	mg/L
Phenol	6	83	.00	4.20	3.02	ug/L
Pimaric Acid	6	83	.00	.72	.34	mg/L
Cadmium	6	67	.00	1.00	.50	ug/L
Camphene	6	67	.00	12.70	5.25	ug/L
Hexachlorocyclopentadiene	6	67	.00	.02	.01	ug/L
Lead	6	67	.00	70.00	14.67	ug/L
Nickel	6	67	.00	26.00	9.50	ug/L
Oleic Acid	6	67	.00	.21	.07	mg/L
Vanadium	6	67	.00	28.00	9.83	ug/L
m-Cresol	6	67	.00	5.50	2.80	ug/L
m-Xylene and p-Xylene	6	67	.00	.27	.15	ug/L
Chromium	6	50	.00	13.00	6.17	ug/L
Hexachlorobenzene	6	50	.00	.02	.00	ug/L
Methylene chloride	6	50	.00	9.60	2.80	ug/L
Styrene	6	50	.00	.34	.14	ug/L
o-Xylene	6	50	.00	.24	.10	ug/L
Benzene	6	33	.00	3.00	.85	ug/L
Bromomethane	6	33	.00	7.60	1.62	ug/L
Chloromethane	6	33	.00	88.00	20.83	ug/L
Mercury	6	33	.00	.45	.08	ug/L
1,1,2,2-Tetrachloroethane	6	17	.00	.32	.05	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.1 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., IROQUOIS FALLS DIVISION

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,1,2-Trichloroethane	6	17	.00	.21	.04	ug/L
1,1-Dichloroethane	6	17	.00	.20	.03	ug/L
1,1-Dichloroethylene	6	17	.00	.32	.05	ug/L
1,2,4-Trichlorobenzene	6	17	.00	.00	.00	ug/L
1,2-Dichlorobenzene	6	17	.00	.24	.04	ug/L
1,2-Dichloroethane	6	17	.00	.82	.14	ug/L
1,2-Dichloropropane	6	17	.00	.20	.03	ug/L
1,3-Dichlorobenzene	6	17	.00	.23	.04	ug/L
1,4-Dichlorobenzene	6	17	.00	.22	.04	ug/L
4-Nitrophenol	6	17	.00	36.00	6.00	ug/L
Bromodichloromethane	6	17	.00	.39	.07	ug/L
Bromoform	6	17	.00	.49	.08	ug/L
Carbon tetrachloride	6	17	.00	1.03	.17	ug/L
Chlorobenzene	6	17	.00	.26	.04	ug/L
Chlorodehydroabietic Acid	6	17	.00	.05	.01	mg/L
Cis-1,3-Dichloropropylene	6	17	.00	.27	.05	ug/L
Dibromochloromethane	6	17	.00	.24	.04	ug/L
Ethylene dibromide	6	17	.00	.18	.03	ug/L
Tetrachloroethylene	6	17	.00	.21	.04	ug/L
Thallium	6	17	.00	30.00	5.00	ug/L
Trans-1,2-Dichloroethylene	6	17	.00	.20	.03	ug/L
Trans-1,3-Dichloropropylene	6	17	.00	.10	.02	ug/L
Trichloroethylene	6	17	.00	.92	.15	ug/L
Trichlorofluoromethane	6	17	.00	.26	.04	ug/L
Vinyl chloride	6	17	.00	.74	.12	ug/L
o-Cresol	6	17	.00	.90	.15	ug/L
p-Cresol	6	17	.00	2.80	.47	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.2a
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., FORT WILLIAM DIVISION
CONTROL POINT # 0100

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	1.83	6.70	3.34	mg/L
Ammonia plus Ammonium	6	100	.06	.13	.10	mg/L
BOD, 5 day, Total Demand	78	100	235.00	689.00	499.33	mg/L
Chloroform	6	100	9.60	43.00	28.43	ug/L
DOC	181	100	107.00	620.00	379.43	mg/L
Dehydroabietic Acid	77	100	.81	5.90	3.13	mg/L
Hydrogen ion (pH)	181	100	5.91	7.45	6.60	
Isopimaric Acid	6	100	.75	5.70	2.95	mg/L
Neoabietic Acid	6	100	.18	.56	.39	mg/L
Nitrate+Nitrite	6	100	.04	.09	.07	mg/L
Oleic Acid	6	100	.05	.28	.12	mg/L
Phenol	5	100	11.90	36.00	21.86	ug/L
Pimaric Acid	6	100	.20	1.55	.62	mg/L
Specific conductance	181	100	401.00	1,391.00	924.45	usiem/cm
Toluene	6	100	3.30	8.80	5.72	ug/L
Total Kjeldahl nitrogen	6	100	1.96	3.60	2.71	mg/L
Total phosphorus	6	100	.03	.47	.30	mg/L
Total suspended solids	181	100	14.00	58.00	31.82	mg/L
m-Cresol	5	100	2.80	8.50	5.72	ug/L
p-Cresol	5	100	3.60	7.70	6.18	ug/L
Aluminum	26	96	.00	1,640.00	527.31	ug/L
Zinc	26	96	.00	90.00	43.38	ug/L
Levopimaric Acid	6	83	.00	.48	.22	mg/L
Chromium	6	67	.00	20.00	10.67	ug/L
Copper	6	67	.00	280.00	52.33	ug/L
Methylene chloride	6	67	.00	24.00	8.77	ug/L
Octachlorodibenzo-p-dioxin	3	67	.00	.08	.05	ng/L
Cadmium	6	50	.00	.50	.22	ug/L
2,4,6-Trichlorophenol	5	40	.00	1.48	.58	ug/L
Benzene	6	33	.00	2.40	.50	ug/L
m-Xylene and p-Xylene	6	33	.00	.61	.15	ug/L
4-Nitrophenol	5	20	.00	4.30	.86	ug/L
1,2,4-Trichlorobenzene	6	17	.00	.01	.00	ug/L
Camphene	6	17	.00	.60	.10	ug/L
Chlorodehydroabietic Acid	6	17	.00	.03	.00	mg/L
Chloromethane	6	17	.00	2.20	.37	ug/L
Hexachlorobenzene	6	17	.00	.00	.00	ug/L
Indole	6	17	.00	3.30	.55	ug/L
Lead	6	17	.00	4.00	.67	ug/L
Nickel	6	17	.00	8.00	1.33	ug/L
Silver	6	17	.00	5.00	.83	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.2a (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., FORT WILLIAM DIVISION
CONTROL POINT # 0100

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Vanadium	6	17	.00	20.00	3.33	ug/L
o-Xylene	6	17	.00	.23	.04	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.2b
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., FORT WILLIAM DIVISION
CONTROL POINT # 0200

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	5	100	2.70	9.70	5.02	mg/L
Aluminum	22	100	150.00	6,900.00	1,620.45	ug/L
Ammonia plus Ammonium	5	100	.14	.24	.21	mg/L
BOD, 5 day, Total Demand	66	100	438.00	1,014.00	839.76	mg/L
Chloroform	5	100	4.00	20.00	8.56	ug/L
DOC	151	100	250.00	920.00	528.54	mg/L
Dehydroabietic Acid	65	100	.10	9.00	5.37	mg/L
Hydrogen ion (pH)	151	100	6.44	7.38	6.96	
Isopimaric Acid	5	100	.85	5.60	3.77	mg/L
Nitrate+Nitrite	5	100	.05	.09	.07	mg/L
Octachlorodibenzo-p-dioxin	2	100	.10	.10	.10	ng/L
Phenol	5	100	21.00	67.00	42.20	ug/L
Pimaric Acid	5	100	.15	3.10	1.08	mg/L
Specific conductance	151	100	772.00	1,370.00	1,119.21	usiem/cm
Toluene	5	100	6.30	31.00	13.50	ug/L
Total Kjeldahl nitrogen	5	100	3.20	5.40	4.52	mg/L
Total phosphorus	5	100	.96	2.00	1.47	mg/L
Total suspended solids	151	100	53.00	235.00	128.70	mg/L
Zinc	22	100	61.00	280.00	172.50	ug/L
p-Cresol	5	100	15.90	82.00	41.56	ug/L
Levopimaric Acid	5	80	.00	2.50	.91	mg/L
Neoabietic Acid	5	80	.00	3.00	1.43	mg/L
Oleic Acid	5	80	.00	.31	.14	mg/L
m-Cresol	5	80	.00	37.00	19.34	ug/L
Cadmium	5	60	.00	1.40	.68	ug/L
Camphene	5	60	.00	10.80	4.66	ug/L
Chromium	5	60	.00	30.00	13.20	ug/L
Copper	5	60	.00	290.00	67.00	ug/L
Methylene chloride	5	60	.00	93.00	21.28	ug/L
m-Xylene and p-Xylene	5	60	.00	.32	.15	ug/L
o-Xylene	5	60	.00	.93	.35	ug/L
Bromomethane	5	40	.00	3.70	1.28	ug/L
Chlorodehydroabietic Acid	5	40	.00	.03	.01	mg/L
Chloromethane	5	40	.00	43.00	8.83	ug/L
Vanadium	5	40	.00	120.00	25.80	ug/L
o-Cresol	5	40	.00	4.00	1.14	ug/L
1,1-Dichloroethane	5	20	.00	1.10	.22	ug/L
1,2,4-Trichlorobenzene	5	20	.00	.00	.00	ug/L
4-Nitrophenol	5	20	.00	28.00	5.60	ug/L
Acenephthene	5	20	.00	1.10	.22	ug/L
Acenaphthylene	5	20	.00	2.40	.48	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.2b (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., FORT WILLIAM DIVISION
CONTROL POINT # 0200

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Hexachlorobenzene	5	20	.00	.01	.00	ug/L
Lead	5	20	.00	5.00	1.00	ug/L
Mercury	5	20	.00	.05	.01	ug/L
Naphthelene	5	20	.00	.50	.10	ug/L
Nickel	5	20	.00	10.00	2.00	ug/L
Styrene	5	20	.00	.33	.07	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.3
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., PROVINCIAL PAPERS DIVISION

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Aluminum	26	100	80.00	4,500.00	2,011.54	ug/L
Ammonia plus Ammonium	6	100	.06	.67	.31	mg/L
BOD, 5 day, Total Demand	77	100	32.00	152.00	88.08	mg/L
Chloroform	6	100	2.00	10.10	4.58	ug/L
DOC	181	100	25.00	250.00	62.49	mg/L
Hydrogen ion (pH)	180	100	5.44	9.21	7.08	
Isopimaric Acid	6	100	.01	.12	.05	mg/L
Nitrate+Nitrite	6	100	.25	.35	.31	mg/L
Specific conductance	181	100	236.00	585.00	351.01	usiem/cm
Total Kjeldahl nitrogen	6	100	.84	1.80	1.20	mg/L
Total phosphorus	6	100	.05	.10	.08	mg/L
Total suspended solids	181	100	8.00	124.00	34.10	mg/L
m-Xylene and p-Xylene	6	100	.22	55.00	9.66	ug/L
o-Xylene	6	100	.30	19.20	3.72	ug/L
Dehydroabietic Acid	78	97	.00	1.32	.36	mg/L
Zinc	26	96	.00	200.00	38.00	ug/L
Lead	6	83	.00	20.00	4.68	ug/L
Methylene chloride	6	83	.00	23.00	10.87	ug/L
Styrene	6	83	.00	1.28	.90	ug/L
Toluene	6	83	.00	1.09	.61	ug/L
Abietic Acid	6	67	.00	.07	.02	mg/L
Benzene	6	67	.00	6.40	1.88	ug/L
Cadmium	6	67	.00	.40	.22	ug/L
Copper	6	67	.00	230.00	59.33	ug/L
Vanadium	6	67	.00	20.00	8.67	ug/L
1-Methylnaphthalene	6	33	.00	.90	.20	ug/L
2-Methylnaphthalene	6	33	.00	.90	.20	ug/L
Bromomethane	6	33	.00	5.70	1.28	ug/L
Naphthalene	6	33	.00	1.20	.38	ug/L
Phenol	6	33	.00	2.50	.48	ug/L
Pimaric Acid	6	33	.00	.05	.01	mg/L
m-Cresol	6	33	.00	1.74	.47	ug/L
p-Cresol	6	33	.00	2.80	.76	ug/L
2,4,5-Trichlorotoluene	6	17	.00	.00	.00	ug/L
2,4,6-Trichlorophenol	6	17	.00	.40	.07	ug/L
Chlorobenzene	6	17	.00	.28	.05	ug/L
Chlorodehydroabietic Acid	6	17	.00	.01	.00	mg/L
Chloromethane	6	17	.00	11.70	1.95	ug/L
Chromium	6	17	.00	4.00	.67	ug/L
Indole	6	17	.00	.60	.10	ug/L
Oleic Acid	6	17	.00	.08	.01	mg/L
Silver	6	17	.00	4.00	.67	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.4
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ABITIBI-PRICE INC., THUNDER BAY DIVISION

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.86	4.30	1.92	mg/L
Aluminum	26	100	240.00	2,500.00	1,035.61	ug/L
Ammonia plus Ammonium	6	100	.04	.07	.05	mg/L
BOD, 5 day, Total Demand	78	100	134.00	866.00	607.82	mg/L
DOC	180	100	101.00	970.00	611.86	mg/L
Dehydroabietic Acid	76	100	.28	3.70	1.58	mg/L
Hydrogen ion (pH)	180	100	3.80	7.83	4.98	
Nitrate+Nitrite	6	100	.15	.35	.26	mg/L
Specific conductance	180	100	256.00	958.00	683.57	usiem/cm
Total Kjeldahl nitrogen	6	100	1.25	2.20	1.73	mg/L
Total phosphorus	6	100	.16	.27	.20	mg/L
Total suspended solids	180	100	12.00	75.00	42.67	mg/L
Zinc	26	100	15.00	161.00	60.45	ug/L
Chloroform	6	83	.00	3.40	2.22	ug/L
Isopimaric Acid	6	83	.00	1.72	.78	mg/L
Levopimaric Acid	6	83	.00	.55	.18	mg/L
Methylene chloride	6	83	.00	9.50	3.76	ug/L
Neoabietic Acid	6	83	.00	.60	.26	mg/L
Pimaric Acid	6	83	.00	.35	.17	mg/L
Toluene	6	83	.00	.90	.51	ug/L
Cadmium	6	67	.00	8.00	1.57	ug/L
Oleic Acid	6	67	.00	.26	.06	mg/L
Phenol	6	67	.00	3.90	2.25	ug/L
m-Cresol	6	67	.00	4.10	2.50	ug/L
4-Nitrophenol	6	50	.00	28.00	10.97	ug/L
Benzene	6	50	.00	6.00	2.03	ug/L
Lead	6	50	.00	15.00	3.47	ug/L
Octachlorodibenzo-p-dioxin	4	50	.00	14.00	3.51	ng/L
p-Cresol	6	50	.00	8.40	2.27	ug/L
Chloromethane	6	33	.00	50.00	8.93	ug/L
Copper	6	33	.00	10.00	3.17	ug/L
Naphthalene	6	33	.00	.60	.17	ug/L
Vanadium	6	33	.00	170.00	29.33	ug/L
Octachlorodibenzofuran	4	25	.00	3.00	.75	ng/L
Total H6CDD	4	25	.00	.47	.12	ng/L
Total H6CDF	4	25	.00	1.10	.28	ng/L
Total H7CDD	4	25	.00	4.60	1.15	ng/L
Total H7CDF	4	25	.00	3.70	.93	ng/L
Total PCDF	4	25	.00	.06	.02	ng/L
1,2,4,5-Tetrachlorobenzene	6	17	.00	.01	.00	ug/L
Bromomethane	6	17	.00	26.00	4.33	ug/L
Camphene	6	17	.00	.80	.13	ug/L
Hexachlorobenzene	6	17	.00	.01	.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.5
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BEAVER WOOD FIBRE COMPANY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Aluminum	24	100	240.00	2,500.00	881.04	ug/L
Ammonia plus Ammonium	6	100	.01	.13	.05	mg/L
BOD, 5 dey, Total Demand	75	100	55.00	200.00	116.28	mg/L
DOC	146	100	5.60	144.00	68.55	mg/L
Dehydroabietic Acid	6	100	.05	.56	.38	mg/L
Hydrogen ion (pH)	146	100	6.90	8.00	7.34	
Isopimeric Acid	6	100	.04	.11	.07	mg/L
Nitrate+Nitrite	6	100	.03	.27	.18	mg/L
Phenol	6	100	3.80	12.10	6.82	ug/L
Specific conductance	146	100	330.00	460.00	379.35	usiem/cm
Toluene	6	100	2.40	14.10	6.75	ug/L
Total Kjeldahl nitrogen	6	100	1.07	3.00	2.11	mg/L
Total phosphorus	6	100	.05	.15	.08	mg/L
Total suspended solids	146	100	3.40	94.00	47.81	mg/L
Zinc	24	92	.00	60.00	27.08	ug/L
Copper	6	83	.00	35.00	12.17	ug/L
Vanadium	6	83	.00	22.00	9.67	ug/L
1,1-Dichloroethylene	6	67	.00	23.00	6.47	ug/L
1,2,4-Trichlorobenzene	6	67	.00	.01	.00	ug/L
Abietic Acid	6	67	.00	.17	.08	mg/L
Molybdenum	6	67	.00	20.00	8.50	ug/L
Pimaric Acid	6	67	.00	.04	.02	mg/L
m-Xylene and p-Xylene	6	67	.00	2.10	1.08	ug/L
o-Xylene	6	67	.00	.72	.34	ug/L
Benzene	6	50	.00	3.20	.69	ug/L
Bromomethane	6	50	.00	12.70	3.95	ug/L
Cadmium	6	50	.00	.60	.27	ug/L
Chloroform	6	50	.00	3.80	1.19	ug/L
m-Cresol	6	50	.00	3.90	.88	ug/L
1,1-Dichloroethane	6	33	.00	.84	.22	ug/L
Chlorodehydroabietic Acid	6	33	.00	.02	.00	mg/L
Chloromethane	6	33	.00	25.00	6.37	ug/L
Chromium	6	33	.00	64.00	12.50	ug/L
Lead	6	33	.00	4.00	1.00	ug/L
Neoabietic Acid	6	33	.00	.02	.01	mg/L
Nickel	6	33	.00	8.00	2.33	ug/L
p-Cresol	6	33	.00	5.00	1.10	ug/L
Oleic Acid	5	20	.00	.01	.00	mg/L
1,2-Dichlorobenzene	6	17	.00	.53	.09	ug/L
1,4-Dichlorobenzene	6	17	.00	1.71	.28	ug/L
2,4,5-Trichlorotoluene	6	17	.00	.00	.00	ug/L
4-Chloro-3-methylphenol	6	17	.00	.40	.07	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.5 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BEAVER WOOD FIBRE COMPANY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Indole	6	17	.00	1.77	.29	ug/L
Levopimaric Acid	6	17	.00	.06	.01	mg/L
Methylene chloride	6	17	.00	5.70	.95	ug/L
Naphthalene	6	17	.00	1.00	.17	ug/L
o-Cresol	6	17	.00	.30	.05	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.6
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4,5-Trichlorotoluene	5	100	.10	1.08	.47	ug/L
Adsorbable Organic Halide	78	100	8.58	37.33	26.84	mg/L
Aluminum	26	100	760.00	1,940.00	1,189.42	ug/L
BOD, 5 day, Total Demand	78	100	66.80	299.00	129.83	mg/L
COD	181	100	194.00	1,346.00	709.01	mg/L
Camphene	6	100	4.40	85.00	23.62	ug/L
Chloroform	6	100	386.00	1,203.80	662.97	ug/L
Copper	6	100	12.00	26.00	22.33	ug/L
Hydrogen ion (pH)	181	100	6.30	7.40	6.78	
Isopimaric Acid	6	100	.02	.37	.10	mg/L
Oleic Acid	6	100	.01	.29	.16	mg/L
Pimaric Acid	6	100	.01	.19	.06	mg/L
Specific conductance	181	100	850.00	1,910.00	1,630.64	usiem/cm
Sulphide	6	100	.05	.31	.18	mg/L
Toluene	6	100	5.80	35.80	16.92	ug/L
Totel Kjeldahl nitrogen	26	100	4.00	16.65	9.54	mg/L
Total phosphorus	26	100	1.24	2.40	1.76	mg/L
Total suspended solids	181	100	66.00	268.00	139.44	mg/L
VSS	26	100	81.00	220.00	130.38	mg/L
Zinc	26	100	118.00	230.00	175.74	ug/L
Dehydroabietic Acid	71	87	.00	1.38	.28	mg/L
Dichlorodehydroabietic Ac.	70	84	.00	.29	.13	mg/L
2,4-Dichlorophenol	6	83	.00	8.10	4.15	ug/L
Chlorodehydroabietic Acid	6	83	.00	.27	.10	mg/L
Chromium	6	83	.00	15.60	8.03	ug/L
Hexachlorocyclopentadiene	6	83	.00	.34	.08	ug/L
Molybdenum	6	83	.00	21.00	15.42	ug/L
Thallium	6	83	.00	30.00	23.33	ug/L
Nitrate+Nitrite	26	81	.00	.40	.17	mg/L
Ammonia plus Ammonium	26	77	.00	.40	.09	mg/L
1,2,3-Trichlorobenzene	6	67	.00	3.05	.82	ug/L
1,2,4,5-Tetrachlorobenzene	3	67	.00	.12	.06	ug/L
2,3,5-Trichlorophenol	6	67	.00	9.50	4.68	ug/L
Neoabietic Acid	6	67	.00	.01	.01	mg/L
Pentachlorobenzene	6	67	.00	.69	.19	ug/L
Total TCDF	6	67	.00	.46	.13	ng/L
Vanadium	6	67	.00	5.20	3.17	ug/L
o-Cresol	6	67	.00	12.00	6.88	ug/L
Octachlorostyrene	5	60	.00	.11	.03	ug/L
2,4,6-Trichlorophenol	6	50	.00	22.00	8.67	ug/L
Abietic Acid	6	50	.00	.17	.03	mg/L
Beryllium	6	50	.00	5.40	1.57	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.6 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BOISE CASCADE CANADA LTD., FORT FRANCES

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Hexachlorobenzene	6	50	.00	.25	.08	ug/L
Levopimaric Acid	6	50	.00	.03	.01	mg/L
m-Xylene and p-Xylene	6	50	.00	1.50	.62	ug/L
1,2,3,4-Tetrachlorobenzene	6	33	.00	.24	.06	ug/L
1,2,3,5-Tetrachlorobenzene	3	33	.00	.11	.04	ug/L
1,2,4-Trichlorobenzene	6	33	.00	.43	.10	ug/L
2,4,5-Trichlorophenol	6	33	.00	12.00	2.98	ug/L
Hexachlorobutadiene	6	33	.00	.08	.01	ug/L
Hexachloroethane	6	33	.00	.14	.04	ug/L
Mercury	6	33	.00	.04	.01	ug/L
Nickel	6	33	.00	10.00	3.33	ug/L
Octachlorodibenzo-p-dioxin	6	33	.00	.04	.01	ng/L
m-Cresol	6	33	.00	28.00	5.58	ug/L
p-Cresol	5	20	.00	13.00	2.60	ug/L
2,3,4,5-Tetrechlorophenol	6	17	.00	.70	.12	ug/L
2,3,4-Trichlorophenol	6	17	.00	12.00	2.00	ug/L
2,3,5,6-Tetrachlorophenol	6	17	.00	2.00	.33	ug/L
2,4-Dimethylphenol	6	17	.00	4.80	.80	ug/L
2,4-Dinitrophenol	6	17	.00	.16	.03	ug/L
2-Chlorophenol	6	17	.00	.30	.05	ug/L
Benzene	6	17	.00	4.00	.67	ug/L
Cadmium	6	17	.00	2.00	.33	ug/L
Chlorobenzene	6	17	.00	2.50	.42	ug/L
Indole	6	17	.00	2.40	.40	ug/L
Methylene chloride	6	17	.00	276.00	46.00	ug/L
Silver	6	17	.00	4.00	.67	ug/L
Styrene	6	17	.00	2.00	.33	ug/L

No. = NUMBER OF ANALYSES
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MIN = MINIMUM CONCENTRATION
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AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

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TABLE 2.7
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BOISE CASCADE CANADA LTD., KENORA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.01	8.06	3.39	mg/L
Aluminum	26	100	140.00	640.00	257.88	ug/L
BOD, 5 day, Total Demand	76	100	31.00	1,031.00	741.52	mg/L
COD	179	100	120.00	2,812.00	2,156.94	mg/L
Chlorodehydroabietic Acid	6	100	.01	.36	.16	mg/L
Copper	6	100	16.00	24.00	18.67	ug/L
DOC	1	100	.87	.87	.87	mg/L
Hydrogen ion (pH)	181	100	3.62	8.17	4.54	
Isopimaric Acid	6	100	.02	9.71	5.09	mg/L
Nitrate+Nitrite	6	100	.20	.55	.32	mg/L
Octachlorodibenzo-p-dioxin	3	100	.07	.44	.26	ng/L
Oleic Acid	6	100	.04	2.62	.95	mg/L
Pimaric Acid	6	100	.02	1.09	.53	mg/L
Specific conductance	181	100	.14	72.00	1.42	usiem/cm
Total Kjeldahl nitrogen	6	100	1.20	17.20	4.72	mg/L
Total phosphorus	6	100	.24	.36	.30	mg/L
Total suspended solids	180	100	14.00	130.00	71.62	mg/L
Zinc	26	100	39.80	122.00	62.70	ug/L
Dehydroabietic Acid	70	99	.00	8.93	4.34	mg/L
1,2,3-Trichlorobenzene	6	83	.00	.13	.06	ug/L
Camphene	6	83	.00	32.65	7.87	ug/L
Chloroform	6	83	.00	11.20	6.58	ug/L
2,4,5-Trichlorotoluene	6	67	.00	.70	.28	ug/L
Chromium	6	67	.00	84.20	16.47	ug/L
Neoabietic Acid	6	67	.00	2.04	.51	mg/L
Phenol	6	67	.00	2.00	.91	ug/L
Beryllium	6	50	.00	2.20	1.03	ug/L
Pentachlorobenzene	6	50	.00	.04	.02	ug/L
1,2,3,4-Tetrachlorobenzene	6	33	.00	.02	.01	ug/L
1,2,4-Trichlorobenzene	6	33	.00	.16	.04	ug/L
2,4-Dimethylphenol	6	33	.00	21.20	3.62	ug/L
Hexachlorobenzene	6	33	.00	.03	.01	ug/L
Molybdenum	6	33	.00	3.00	.92	ug/L
Octachlorodibenzofuran	3	33	.00	.08	.03	ng/L
Phenanthrene	6	33	.00	1.00	.28	ug/L
Thallium	6	33	.00	20.00	5.83	ug/L
Total TCDF	3	33	.00	.21	.07	ng/L
Vanadium	6	33	.00	2.60	.83	ug/L
m-Cresol	6	33	.00	5.20	.92	ug/L
m-Xylene and p-Xylene	6	33	.00	2.00	.53	ug/L
Levopimaric Acid	5	20	.00	.14	.03	mg/L
2,4-Dichlorophenol	6	17	.00	1.70	.28	ug/L

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AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
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TABLE 2.7 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT BOISE CASCADE CANADA LTD., KENORA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2-Methylnaphthalene	6	17	.00	.50	.08	ug/L
Ammonia plus Ammonium	6	17	.00	.03	.00	mg/L
Bromodichloromethane	6	17	.00	6.60	1.10	ug/L
Fluorene	6	17	.00	.25	.04	ug/L
Hexachlorobutadiene	6	17	.00	.03	.00	ug/L
Hexachlorocyclopentadiene	6	17	.00	.05	.01	ug/L
Hexachloroethane	6	17	.00	.04	.01	ug/L
Lead	6	17	.00	10.00	1.67	ug/L
Naphthalene	6	17	.00	.60	.10	ug/L
Nickel	6	17	.00	8.00	1.33	ug/L
Octachlorostyrene	6	17	.00	.01	.00	ug/L
Styrene	6	17	.00	.80	.13	ug/L
o-Cresol	6	17	.00	.65	.11	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.8
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2,3-Trichlorobenzene	6	100	.36	1.26	.81	ug/L
Adsorbable Organic Halide	78	100	10.68	39.05	25.42	mg/L
Aluminum	34	100	680.00	2,200.00	1,248.53	ug/L
BOD, 5 day, Total Demand	78	100	15.00	47.00	34.29	mg/L
COD	181	100	375.00	720.00	585.47	mg/L
Chlorodehydroabietic Acid	6	100	.01	.23	.08	mg/L
Chloroform	6	100	20.80	278.00	133.13	ug/L
Dehydroabietic Acid	79	100	.01	.08	.04	mg/L
Dichlorodehydroabietic Ac.	78	100	.02	.18	.10	mg/L
Hydrogen ion (pH)	181	100	6.73	8.35	7.18	
PCBT	1	100	.26	.26	.26	ug/L
Specific conductance	181	100	1,170.00	2,600.00	1,875.13	usiem/cm
Sulphide	5	100	.02	.08	.05	mg/L
Total Kjeldahl nitrogen	26	100	.28	4.06	1.92	mg/L
Total phosphorus	6	100	1.60	2.20	1.97	mg/L
Total suspended solids	181	100	33.20	109.60	59.90	mg/L
VSS	25	100	42.40	78.80	57.70	mg/L
Zinc	33	100	69.80	180.00	107.79	ug/L
Ammonia plus Ammonium	26	96	.00	2.80	.89	mg/L
2,4-Dichlorophenol	6	83	.00	6.50	3.77	ug/L
Isopimaric Acid	6	83	.00	.04	.01	mg/L
Molybdenum	6	83	.00	26.50	18.92	ug/L
Neoabietic Acid	6	83	.00	.06	.02	mg/L
Oleic Acid	6	83	.00	.18	.07	mg/L
Thallium	6	83	.00	40.00	28.33	ug/L
Hexachlorobutadiene	5	80	.00	.11	.05	ug/L
1,2,4,5-Tetrachlorobenzene	4	75	.00	.18	.08	ug/L
2,4,5-Trichlorotoluene	6	67	.00	.85	.35	ug/L
Abietic Acid	6	67	.00	.14	.04	mg/L
Octachlorostyrene	6	67	.00	.99	.26	ug/L
Pentachlorobenzene	6	67	.00	.73	.20	ug/L
Pimaric Acid	6	67	.00	.03	.01	mg/L
o-Cresol	6	67	.00	3.75	1.43	ug/L
Total TCDF	5	60	.00	.19	.06	ng/L
1,2,3,4-Tetrachlorobenzene	6	50	.00	.05	.02	ug/L
1,2,3,5-Tetrachlorobenzene	4	50	.00	1.00	.34	ug/L
2,3,5-Trichlorophenol	6	50	.00	19.80	7.47	ug/L
Beryllium	6	50	.00	3.00	1.13	ug/L
Copper	6	50	.00	12.00	4.17	ug/L
Hexechlorobenzene	6	50	.00	2.21	.68	ug/L
Vanedium	6	50	.00	4.00	1.47	ug/L
m-Cresol	6	50	.00	1.10	.35	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.8 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT CANADIAN PACIFIC FOREST PRODUCTS LTD., DRYDEN

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2,4-Trichlorobenzene	6	33	.00	.31	.09	ug/L
2,3,4,5-Tetrachlorophenol	6	33	.00	1.70	.35	ug/L
2,3,5,6-Tetrachlorophenol	6	33	.00	2.00	.55	ug/L
2,4,6-Trichlorophenol	6	33	.00	27.00	7.63	ug/L
Hexachlorocyclopentadiene	6	33	.00	.11	.02	ug/L
Hexachloroethene	6	33	.00	.10	.03	ug/L
Lead	6	33	.00	12.00	3.67	ug/L
Levopimaric Acid	6	33	.00	.01	.00	mg/L
Methylene chloride	6	33	.00	108.00	20.67	ug/L
Pentachlorophenol	6	33	.00	2.00	.53	ug/L
Silver	6	33	.00	6.00	2.00	ug/L
Toluene	6	33	.00	12.60	3.23	ug/L
m-Xylene and p-Xylene	6	33	.00	3.80	.82	ug/L
Nitrate+Nitrite	26	31	.00	4.85	.94	mg/L
1,2-Dichlorobenzene	6	17	.00	2.30	.38	ug/L
2,3,4-Trichlorophenol	6	17	.00	28.00	4.67	ug/L
2,4,5-Trichlorophenol	6	17	.00	9.70	1.62	ug/L
2,4-Dinitrophenol	6	17	.00	1.80	.30	ug/L
4-Nitrophenol	6	17	.00	1.80	.30	ug/L
Bromodichloromethane	6	17	.00	6.60	1.10	ug/L
Mercury	6	17	.00	.08	.01	ug/L
Naphthalene	6	17	.00	1.60	.27	ug/L
Nickel	6	17	.00	14.00	2.33	ug/L
o-Xylene	6	17	.00	2.70	.45	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.9
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4-Dichlorophenol	6	100	2.00	6.80	4.03	ug/L
Adsorbable Organic Halide	86	100	1.58	58.17	24.29	mg/L
Aluminum	30	100	3.83	6,840.00	4,475.73	ug/L
BOD, 5 day, Total Demand	77	100	24.00	498.00	280.75	mg/L
COD	181	100	114.00	1,875.00	988.16	mg/L
Chloroform	6	100	1,084.00	1,757.60	1,404.77	ug/L
Chromium	6	100	70.00	92.20	80.77	ug/L
Copper	6	100	17.00	42.00	24.83	ug/L
Dehydroabietic Acid	77	100	.31	6.30	1.79	mg/L
Hydrogen ion (pH)	180	100	5.88	7.83	6.67	
Specific conductance	180	100	300.00	2,300.00	1,591.91	usiem/cm
Sulphide	6	100	.06	.24	.14	mg/L
Total phosphorus	25	100	.38	1.02	.67	mg/L
Total suspended solids	180	100	32.80	404.80	92.50	mg/L
Zinc	29	100	.09	330.00	148.55	ug/L
Dichlorodehydroabietic Ac.	77	99	.00	.16	.05	mg/L
Total Kjeldahl nitrogen	25	92	.00	2.60	1.44	mg/L
Hexachlorobenzene	6	83	.00	1.35	.51	ug/L
Octachlorostyrene	6	83	.00	.11	.06	ug/L
Phenol	6	83	.00	117.00	30.00	ug/L
Hexachlorobutadiene	4	75	.00	.16	.06	ug/L
Total TCDF	7	71	.00	.13	.05	ng/L
Camphene	6	67	.00	23.00	6.13	ug/L
Chlorodehydroabietic Acid	6	67	.00	.81	.27	mg/L
Hexachloroethane	6	67	.00	.14	.05	ug/L
Molybdenum	6	67	.00	12.00	6.58	ug/L
Oleic Acid	6	67	.00	.43	.20	mg/L
Vanadium	6	67	.00	6.20	3.47	ug/L
Ammonia plus Ammonium	25	60	.00	.30	.04	mg/L
m-Cresol	5	60	.00	79.00	16.04	ug/L
Octachlorodibenzo-p-dioxin	7	57	.00	.95	.19	ng/L
1,2,3-Trichlorobenzene	6	50	.00	.82	.32	ug/L
1,2,4,5-Tetrachlorobenzene	4	50	.00	.30	.13	ug/L
2,3,5-Trichlorophenol	6	50	.00	8.30	2.82	ug/L
2,4,5-Trichlorotoluene	6	50	.00	1.41	.53	ug/L
2,4,6-Trichlorophenol	6	50	.00	14.00	4.70	ug/L
Abietic Acid	6	50	.00	2.21	.39	mg/L
Hexachlorocyclopentadiene	6	50	.00	.15	.03	ug/L
Isopimaric Acid	6	50	.00	2.52	.58	mg/L
Naphthalene	6	50	.00	2.50	.92	ug/L
Pentachlorobenzene	6	50	.00	1.26	.43	ug/L
Pimaric Acid	6	50	.00	.41	.11	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.9 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT CANADIAN PACIFIC FOREST PRODUCTS LTD., THUNDER BAY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2,3,4-Tetrachlorobenzene	6	33	.00	.37	.09	ug/L
1,2,4-Trichlorobenzene	6	33	.00	.98	.25	ug/L
2,3,4,5-Tetrachlorophenol	6	33	.00	.60	.17	ug/L
Cadmium	6	33	.00	2.00	.67	ug/L
Mercury	6	33	.00	.04	.01	ug/L
Neoabietic Acid	6	33	.00	.58	.11	mg/L
Nickel	6	33	.00	10.00	2.67	ug/L
Phenanthrene	6	33	.00	.50	.15	ug/L
Thallium	6	33	.00	25.00	7.50	ug/L
p-Cresol	5	20	.00	.40	.08	ug/L
1,1,2,2-Tetrachloroethane	6	17	.00	4.30	.72	ug/L
1,1-Dichloroethylene	6	17	.00	2.80	.47	ug/L
2,4,5-Trichlorophenol	6	17	.00	5.10	.85	ug/L
2,4-Dimethylphenol	6	17	.00	3.50	.58	ug/L
2-Chlorophenol	6	17	.00	.45	.08	ug/L
2-Methylnaphthalene	6	17	.00	.50	.08	ug/L
Acenaphthene	6	17	.00	.80	.13	ug/L
Beryllium	6	17	.00	4.40	.73	ug/L
Bromodichloromethane	6	17	.00	1.23	.21	ug/L
Cobalt	6	17	.00	2.00	.33	ug/L
Fluoranthene	6	17	.00	.20	.03	ug/L
Indole	6	17	.00	1.20	.20	ug/L
Levopimeric Acid	6	17	.00	.03	.01	mg/L
Silver	6	17	.00	5.00	.83	ug/L
Toluene	6	17	.00	.50	.08	ug/L
m-Xylene and p-Xylene	6	17	.00	5.80	.97	ug/L
o-Cresol	6	17	.00	2.20	.37	ug/L
Octachlorodibenzofuran	7	14	.00	.09	.01	ng/L
Nitrate+Nitrite	25	4	.00	.09	.00	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.10
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	No.	F.D (%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.06	.26	.17	mg/L
Adsorbable Organic Halide	77	100	.14	5.30	3.17	mg/L
Aluminum	26	100	490.00	2,020.00	1,332.31	ug/L
BOD, 5 day, Total Demand	77	100	100.00	256.00	174.38	mg/L
Benzene	6	100	4.40	12.50	7.97	ug/L
COD	176	100	230.00	855.00	510.55	mg/L
Chlorodehydroabietic Acid	6	100	.01	.09	.04	mg/L
Chloroform	6	100	137.00	349.00	237.17	ug/L
Dehydroabietic Acid	77	100	.19	.80	.46	mg/L
Hydrogen ion (pH)	175	100	5.55	9.39	7.19	
Levopimeric Acid	1	100	.01	.01	.01	mg/L
Nitrate+Nitrite	6	100	.03	.55	.19	mg/L
Octachlorodibenzo-p-dioxin	6	100	.09	.37	.19	ng/L
Oleic Acid	6	100	.01	.15	.06	mg/L
Phenol	6	100	19.60	186.00	108.20	ug/L
Specific conductance	176	100	481.00	1,472.00	1,124.36	usiem/cm
Sulphide	6	100	.02	.95	.29	mg/L
Toluene	6	100	3.50	8.10	5.62	ug/L
Total Kjeldahl nitrogen	6	100	1.30	4.00	2.82	mg/L
Total TCDF	6	100	.01	.10	.04	ng/L
Total phosphorus	6	100	.22	.50	.34	mg/L
Total suspended solids	175	100	41.00	152.00	79.31	mg/L
Zinc	26	100	20.00	80.00	45.19	ug/L
Ammonia plus Ammonium	6	83	.00	1.13	.62	mg/L
Neoabietic Acid	6	83	.00	.10	.05	mg/L
Phenanthrene	6	83	.00	19.90	9.77	ug/L
Styrene	6	83	.00	4.90	3.43	ug/L
Copper	6	67	.00	10.00	6.67	ug/L
Fluoranthene	6	67	.00	9.00	3.28	ug/L
Isopimaric Acid	6	67	.00	.01	.01	mg/L
Pimaric Acid	6	67	.00	.01	.01	mg/L
Pyrene	6	67	.00	6.60	2.10	ug/L
Acenaphthylene	6	50	.00	5.40	1.90	ug/L
Chromium	6	50	.00	20.00	10.00	ug/L
Naphthalene	6	50	.00	8.60	3.30	ug/L
Dichlorodehydroabietic Ac.	77	42	.00	.13	.01	mg/L
1,2,4-Trichlorobenzene	6	33	.00	.01	.00	ug/L
Bromodichloromethane	6	33	.00	3.70	.92	ug/L
Chrysene	6	33	.00	1.70	.47	ug/L
Vanadium	6	33	.00	20.00	6.67	ug/L
o-Cresol	6	33	.00	8.20	2.33	ug/L
Mercury	5	20	.00	.09	.02	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.10 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., FINE PAPERS DIVISION (CORNWALL)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Anthracene	6	17	.00	1.60	.27	ug/L
Benz(a)anthracene	6	17	.00	.90	.15	ug/L
Cadmium	6	17	.00	4.00	.67	ug/L
Indole	6	17	.00	5.60	.93	ug/L
Total H7CDD	6	17	.00	.05	.01	ng/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.11
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., CONTAINERBOARD DIVISION (RED ROCK)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4,6-Trichlorophenol	5	100	3.50	5.50	4.30	ug/L
Abietic Acid	5	100	.72	2.27	1.11	mg/L
Adsorbable Organic Halide	66	100	.20	3.60	1.83	mg/L
Aluminum	22	100	2,150.00	6,410.00	3,445.45	ug/L
Ammonia plus Ammonium	5	100	.16	.80	.43	mg/L
BOD, 5 day, Total Demand	79	100	90.00	235.00	165.41	mg/L
COD	181	100	70.00	935.00	444.51	mg/L
Chloroform	5	100	71.20	190.00	140.18	ug/L
Dehydroabietic Acid	65	100	.68	2.29	1.29	mg/L
Hydrogen ion (pH)	181	100	7.41	10.82	8.63	
Isopimaric Acid	5	100	.21	.45	.27	mg/L
Neoabietic Acid	5	100	.80	4.50	1.61	mg/L
Oleic Acid	5	100	.04	.18	.09	mg/L
Pimaric Acid	5	100	.09	.13	.11	mg/L
Specific conductance	181	100	33.00	1,355.00	720.20	usiem/cm
Sulphide	5	100	.04	3.06	.71	mg/L
Total Kjeldahl nitrogen	5	100	1.10	2.60	1.80	mg/L
Totel phosphorus	5	100	.20	.30	.22	mg/L
Total suspended solids	181	100	26.00	237.00	65.59	mg/L
Zinc	22	100	30.00	70.00	42.27	ug/L
Octachlorodibenzo-p-dioxin	6	83	.00	.38	.24	ng/L
Nitrate+Nitrite	5	80	.00	.13	.08	mg/L
Phenol	5	80	.00	5.30	3.26	ug/L
Chromium	5	40	.00	20.00	8.00	ug/L
Hexachlorobenzene	5	40	.00	.08	.02	ug/L
Dichlorodehydroabietic Ac.	66	38	.00	.67	.03	mg/L
1,2,4-Trichlorobenzene	5	20	.00	.01	.00	ug/L
Chlorodehydroabietic Acid	5	20	.00	.09	.02	mg/L
Hexachlorobutadiene	5	20	.00	.07	.01	ug/L
Hexachloroethane	5	20	.00	.01	.00	ug/L
Octachlorostyrene	5	20	.00	.05	.01	ug/L
Pentachlorobenzene	5	20	.00	.01	.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.12
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.04	.35	.16	mg/L
Aluminum	25	100	180.00	5,200.00	1,904.00	ug/L
Ammonia plus Ammonium	6	100	.01	.11	.06	mg/L
BOD, 5 day, Totel Demand	77	100	28.00	480.00	113.21	mg/L
COD	175	100	24.00	34,000.00	1,417.38	mg/L
Dehydroabietic Acid	6	100	.27	2.70	.95	mg/L
Hydrogen ion (pH)	178	100	5.70	7.60	6.67	
Nitrate+Nitrite	6	100	.15	.46	.37	mg/L
Specific conductance	178	100	208.00	611.10	380.92	usiem/cm
Total Kjeldahl nitrogen	6	100	.74	3.70	1.78	mg/L
Total phosphorus	6	100	.01	.04	.02	mg/L
Total suspended solids	178	100	3.00	880.00	39.97	mg/L
Isopimaric Acid	6	83	.00	.34	.07	mg/L
Venadium	6	83	.00	55.00	15.33	ug/L
Zinc	25	80	.00	30.00	13.76	ug/L
Cadmium	6	67	.00	2.00	.53	ug/L
Chloroform	6	67	.00	10.00	2.46	ug/L
Chromium	6	67	.00	12.00	6.00	ug/L
Copper	6	67	.00	14.00	6.33	ug/L
Methylene chloride	6	67	.00	47.00	17.23	ug/L
Toluene	6	67	.00	.58	.30	ug/L
m-Xylene and p-Xylene	6	67	.00	1.78	.57	ug/L
o-Xylene	6	67	.00	.38	.20	ug/L
Benzene	6	50	.00	8.80	1.66	ug/L
Octachlorodibenzo-p-dioxin	2	50	.00	.20	.10	ng/L
Phenol	6	50	.00	1.90	.64	ug/L
2,4,5-Trichlorotoluene	6	33	.00	.01	.00	ug/L
Bromomethane	6	33	.00	68.00	12.25	ug/L
Chlorodehydroabietic Acid	6	33	.00	.04	.01	mg/L
Chloromethane	6	33	.00	31.00	9.96	ug/L
Dibromochloromethane	6	33	.00	.32	.10	ug/L
Lead	6	33	.00	30.00	5.50	ug/L
Levopimaric Acid	6	33	.00	.40	.07	mg/L
Pimeric Acid	6	33	.00	.36	.06	mg/L
Styrene	6	33	.00	.31	.09	ug/L
1,1-Dichloroethylene	6	17	.00	.33	.06	ug/L
1,2,3,4-Tetrachlorobenzene	6	17	.00	.01	.00	ug/L
1,2,4-Trichlorobenzene	6	17	.00	.00	.00	ug/L
Bromodichloromethane	6	17	.00	1.60	.27	ug/L
Camphene	6	17	.00	12.70	2.12	ug/L
Molybdenum	6	17	.00	21.00	3.50	ug/L
Nickel	6	17	.00	4.00	.67	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less then the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.12 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., FINE PAPERS DIVISION (ST. CATHARINES)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Pentechlorobenzene	6	17	.00	.00	.00	ug/L
Tetrachloroethylene	6	17	.00	2.70	.45	ug/L
Trichloroethylene	6	17	.00	6.90	1.15	ug/L
Trichlorofluoromethane	6	17	.00	2.90	.48	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.13
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT DOMTAR INC., CONTAINERBOARD DIVISION (TRENTON)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.38	.98	.60	mg/L
Aluminum	26	100	2,150.00	4,470.00	3,003.08	ug/L
BOD, 5 day, Total Demand	76	100	640.00	2,677.00	1,298.72	mg/L
COD	177	100	1,142.00	5,616.00	2,565.44	mg/L
Copper	6	100	30.00	50.00	40.00	ug/L
Dehydroabietic Acid	77	100	.32	1.84	1.14	mg/L
Hydrogen ion (pH)	177	100	7.20	8.50	7.88	
Isopimaric Acid	6	100	.15	.40	.23	mg/L
Nitrate+Nitrite	6	100	.28	.57	.45	mg/L
Octachlorodibenzo-p-dioxin	1	100	15.00	15.00	15.00	ng/L
Octachlorodibenzofuran	1	100	.84	.84	.84	ng/L
Oleic Acid	6	100	.21	.71	.37	mg/L
Phenol	6	100	678.00	1,390.00	840.00	ug/L
Pimaric Acid	6	100	.07	.26	.13	mg/L
Specific conductance	177	100	532.00	2,230.00	1,038.94	usiem/cm
Totel H6CDD	1	100	.30	.30	.30	ng/L
Total H6CDF	1	100	.14	.14	.14	ng/L
Total H7CDD	1	100	1.20	1.20	1.20	ng/L
Total H7CDF	1	100	.29	.29	.29	ng/L
Total Kjeldahl nitrogen	6	100	3.10	9.80	6.10	mg/L
Total TCDF	1	100	.07	.07	.07	ng/L
Total phosphorus	6	100	.14	1.50	.96	mg/L
Total suspended solids	177	100	40.00	620.00	147.91	mg/L
Zinc	26	100	90.00	230.00	155.38	ug/L
o-Cresol	6	100	10.00	14.20	12.10	ug/L
Ammonia plus Ammonium	6	50	.00	.68	.18	mg/L
Cedmium	6	50	.00	7.00	2.50	ug/L
Chlorodehydroabietic Acid	6	50	.00	.04	.01	mg/L
Chloroform	6	50	.00	4.30	1.05	ug/L
Chromium	6	50	.00	30.00	13.33	ug/L
Mercury	6	50	.00	1.73	.46	ug/L
Neoabietic Acid	6	33	.00	2.65	.60	mg/L
Nickel	6	33	.00	10.00	3.33	ug/L
1,2,3-Trichlorobenzene	6	17	.00	.01	.00	ug/L
1,2,4-Trichlorobenzene	6	17	.00	.01	.00	ug/L
Benzene	6	17	.00	.70	.12	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.14
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Adsorbable Organic Halide	72	100	2.30	16.50	8.49	mg/L
Aluminum	32	100	140.00	4,100.00	930.31	ug/L
Ammonia plus Ammonium	4	100	.64	1.25	.99	mg/L
BOD, 5 day, Total Demand	80	100	5.00	45.00	18.30	mg/L
Chloroform	6	100	6.90	43.00	17.08	ug/L
DOC	175	100	4.55	181.00	119.86	mg/L
Hydrogen ion (pH)	175	100	7.10	8.70	7.59	
Nitrate+Nitrite	4	100	.01	.13	.09	mg/L
Specific conductance	175	100	660.00	2,270.00	1,557.17	usiem/cm
Total Kjeldahl nitrogen	4	100	1.82	5.60	3.53	mg/L
Total phosphorus	4	100	.38	.75	.56	mg/L
Total suspended solids	175	100	3.00	66.00	29.36	mg/L
VSS	26	96	.00	40.00	20.55	mg/L
Zinc	32	88	.00	150.00	82.28	ug/L
Nickel	6	83	.00	60.00	31.50	ug/L
Sulphide	6	83	.00	.19	.11	mg/L
2,4,6-Trichlorophenol	6	67	.00	9.80	3.47	ug/L
Cadmium	6	67	.00	4.00	1.42	ug/L
Copper	6	67	.00	290.00	57.33	ug/L
Methylene chloride	6	67	.00	140.00	27.40	ug/L
Toluene	6	67	.00	1.15	.50	ug/L
Benzene	6	50	.00	4.30	1.31	ug/L
Bromomethane	6	50	.00	8.50	2.63	ug/L
Chromium	6	50	.00	50.00	14.33	ug/L
Lead	6	50	.00	80.00	14.33	ug/L
Vanadium	6	50	.00	70.00	16.67	ug/L
Dehydroabietic Acid	83	41	.00	.06	.01	mg/L
2,4-Dichlorophenol	6	33	.00	1.70	.37	ug/L
Chloromethane	6	33	.00	12.00	3.15	ug/L
Cobalt	6	33	.00	22.00	5.33	ug/L
Indole	6	33	.00	6.20	1.13	ug/L
Phenol	6	33	.00	.80	.25	ug/L
Total TCDF	6	33	.00	.10	.03	ng/L
1,1-Dichloroethylene	6	17	.00	1.47	.25	ug/L
1,2,3,4-Tetrachlorobenzene	6	17	.00	.01	.00	ug/L
Chlorodehydroabietic Acid	6	17	.00	.01	.00	mg/L
Hexechlorocyclopentadiene	6	17	.00	.01	.00	ug/L
Hexachloroethane	6	17	.00	.01	.00	ug/L
Isopimaric Acid	6	17	.00	.03	.00	mg/L
Molybdenum	6	17	.00	5.00	.83	ug/L
Neoabietic Acid	6	17	.00	.01	.00	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.14 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT E.B. EDDY FOREST PRODUCTS LTD., ESPANOLA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Oleic Acid	6	17	.00	.05	.01	mg/L
Pentachlorophenol	6	17	.00	1.10	.18	ug/L
Phenanthrene	6	17	.00	.20	.03	ug/L
Pimaric Acid	6	17	.00	.02	.00	mg/L
Styrene	6	17	.00	.37	.06	ug/L
Thallium	6	17	.00	14.00	2.33	ug/L
Trichlorofluoromethane	6	17	.00	2.20	.37	ug/L
m-Cresol	6	17	.00	3.30	.55	ug/L
o-Cresol	6	17	.00	1.60	.27	ug/L
p-Cresol	6	17	.00	1.70	.28	ug/L
Dichlorodehydroabietic Ac.	83	5	.00	.01	.00	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.15
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,2,3-Trichlorobenzene	5	100	.01	.01	.01	ug/L
1,2,4-Trichlorobenzene	5	100	.00	.06	.03	ug/L
Abietic Acid	4	100	.01	.31	.10	mg/L
Aluminum	21	100	1,330.00	6,600.00	2,780.48	ug/L
Ammonia plus Ammonium	5	100	.25	.33	.28	mg/L
BOD, 5 day, Total Demand	78	100	54.00	350.00	156.33	mg/L
COD	158	100	129.00	635.00	381.73	mg/L
Chloroform	5	100	1.88	7.30	3.48	ug/L
Dehydroabietic Acid	4	100	.10	.85	.45	mg/L
Hydrogen ion (pH)	158	100	5.20	11.14	7.54	
Nitrate+Nitrite	5	100	.21	.39	.28	mg/L
Specific conductance	158	100	226.00	657.00	354.52	usiem/cm
Total Kjeldahl nitrogen	5	100	1.30	10.20	3.74	mg/L
Total phosphorus	5	100	.03	.39	.11	mg/L
Total suspended solids	158	100	21.00	377.10	75.74	mg/L
1,2,3,4-Tetrachlorobenzene	5	80	.00	.02	.01	ug/L
Copper	5	80	.00	15.00	9.60	ug/L
Naphthalene	5	80	.00	5.30	2.89	ug/L
Isopimaric Acid	4	75	.00	.03	.01	mg/L
Zinc	21	71	.00	200.00	19.81	ug/L
Benzene	5	60	.00	4.00	1.11	ug/L
Bromomethane	5	60	.00	13.00	3.62	ug/L
Cadmium	5	60	.00	.70	.32	ug/L
Nickel	5	60	.00	15.00	5.80	ug/L
m-Xylene and p-Xylene	5	60	.00	1.70	.61	ug/L
o-Xylene	5	60	.00	.60	.29	ug/L
Levopimaric Acid	4	50	.00	.07	.03	mg/L
Octachlorodibenzo-p-dioxin	2	50	.00	.10	.05	ng/L
Pimeric Acid	4	50	.00	.01	.01	mg/L
Lead	5	40	.00	5.00	1.60	ug/L
Phenol	5	40	.00	1.40	.42	ug/L
Toluene	5	40	.00	1.23	.33	ug/L
m-Cresol	5	40	.00	1.80	.48	ug/L
Beryllium	5	20	.00	12.00	2.40	ug/L
Chloromethane	5	20	.00	2.20	.44	ug/L
Chromium	5	20	.00	22.00	4.40	ug/L
Cobalt	5	20	.00	22.00	4.40	ug/L
Hexachlorocyclopentadiene	5	20	.00	.02	.00	ug/L
Mercury	5	20	.00	.15	.03	ug/L
Methylene chloride	5	20	.00	1.76	.35	ug/L
Molybdenum	5	20	.00	12.00	2.40	ug/L
Silver	5	20	.00	10.00	2.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.15 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT E.B. EDDY FOREST PRODUCTS LTD., OTTAWA

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Thallium	5	20	.00	28.00	5.60	ug/L
Vanadium	5	20	.00	12.00	2.40	ug/L
p-Cresol	5	20	.00	.80	.16	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
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TABLE 2.16
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT JAMES RIVER-MARATHON LTD.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.03	.34	.14	mg/L
Adsorbable Organic Helide	77	100	.79	461.05	55.66	mg/L
Aluminum	25	100	170.00	610.00	258.40	ug/L
Ammonia plus Ammonium	6	100	1.52	3.51	2.46	mg/L
BOD, 5 day, Total Demand	76	100	72.00	264.00	203.67	mg/L
COD	170	100	222.00	1,104.00	779.32	mg/L
Chlorodehydroabietic Acid	6	100	.10	.62	.25	mg/L
Chloroform	6	100	640.00	1,700.00	1,126.67	ug/L
Dehydroabietic Acid	75	100	.01	.27	.06	mg/L
Dichlorodehydroabietic Ac.	76	100	.01	.50	.07	mg/L
Hydrogen ion (pH)	170	100	2.30	10.01	3.19	
Isopimaric Acid	6	100	.03	.11	.06	mg/L
Levopimaric Acid	6	100	.02	.09	.06	mg/L
Mercury	6	100	.10	3.40	.68	ug/L
Neoabietic Acid	6	100	.01	.45	.09	mg/L
Octachlorodibenzo-p-dioxin	6	100	.27	1.40	.60	ng/L
Oleic Acid	6	100	.03	.33	.14	mg/L
Pimaric Acid	6	100	.02	.05	.03	mg/L
Specific conductance	170	100	530.00	4,200.00	2,210.18	usiem/cm
Sulphide	6	100	.09	10.50	2.01	mg/L
Total Kjeldahl nitrogen	6	100	1.82	4.95	3.04	mg/L
Total TCDF	6	100	.03	1.60	.49	ng/L
Totel phosphorus	5	100	.31	.97	.65	mg/L
Totel suspended solids	170	100	23.00	104.00	41.78	mg/L
Zinc	25	92	.00	490.00	74.80	ug/L
Copper	6	83	.00	90.00	36.67	ug/L
Lead	6	83	.00	30.00	25.00	ug/L
Total PCDD	6	83	.00	.09	.04	ng/L
Total PCDF	6	83	.00	1.20	.29	ng/L
Total TCDD	6	83	.00	.14	.07	ng/L
Vanedium	6	83	.00	60.00	30.00	ug/L
Chromium	6	67	.00	20.00	13.33	ug/L
Cobalt	6	67	.00	20.00	13.33	ug/L
Molybdenum	6	67	.00	60.00	20.00	ug/L
Total H7CDD	6	67	.00	.75	.18	ng/L
Camphene	6	50	.00	8.20	3.08	ug/L
Total H6CDD	6	50	.00	.27	.07	ng/L
Total H6CDF	6	50	.00	.31	.08	ng/L
1,2,4,5-Tetrachlorobenzene	6	33	.00	.06	.01	ug/L
2,3,5-Trichlorophenol	6	33	.00	14.00	3.10	ug/L
2,3,7,8 TCDD	6	33	.00	.08	.02	ng/L
Bromoform	6	33	.00	340.00	58.87	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
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AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

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TABLE 2.16 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT JAMES RIVER-MARATHON LTD.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Hexachlorobenzene	6	33	.00	.06	.01	ug/L
Hexachlorobutadiene	6	33	.00	.03	.01	ug/L
Hexachlorocyclopentadiene	6	33	.00	.05	.02	ug/L
Methylene chloride	6	33	.00	400.00	110.03	ug/L
Nickel	6	33	.00	30.00	8.33	ug/L
Nitrate+Nitrite	6	33	.00	37.20	6.32	mg/L
Octachlorodibenzofuran	6	33	.00	.16	.05	ng/L
Phenol	6	33	.00	9.90	1.93	ug/L
Total H7CDF	6	33	.00	.17	.06	ng/L
1,1,2,2-Tetrachloroethane	6	17	.00	14.40	2.40	ug/L
1,1,2-Trichloroethane	6	17	.00	22.80	3.80	ug/L
1,1-Dichloroethane	6	17	.00	20.40	3.40	ug/L
1,1-Dichloroethylene	6	17	.00	14.40	2.40	ug/L
1,2,3,5-Tetrachlorobenzene	6	17	.00	.01	.00	ug/L
1,2,3-Trichlorobenzene	6	17	.00	.03	.01	ug/L
1,2-Dichlorobenzene	6	17	.00	15.60	2.60	ug/L
1,2-Dichloroethane	6	17	.00	16.80	2.80	ug/L
1,2-Dichloropropane	6	17	.00	21.60	3.60	ug/L
1,3-Dichlorobenzene	6	17	.00	13.20	2.20	ug/L
1,4-Dichlorobenzene	6	17	.00	9.60	1.60	ug/L
2,3,4,5-Tetrachlorophenol	6	17	.00	2.60	.43	ug/L
2,4,5-Trichlorotoluene	6	17	.00	.05	.01	ug/L
4-Chloro-3-methylphenol	6	17	.00	9.20	1.53	ug/L
Benzene	6	17	.00	9.60	1.60	ug/L
Bromomethane	6	17	.00	390.00	65.00	ug/L
Cadmium	6	17	.00	2.00	.33	ug/L
Carbon tetrachloride	6	17	.00	12.00	2.00	ug/L
Chlorobenzene	6	17	.00	24.00	4.00	ug/L
Chloromethane	6	17	.00	1,100.00	183.33	ug/L
Cis-1,3-Dichloropropylene	6	17	.00	27.60	4.60	ug/L
Dibromochloromethane	6	17	.00	16.80	2.80	ug/L
Ethylene dibromide	6	17	.00	22.80	3.80	ug/L
Fluoranthene	6	17	.00	2.40	.40	ug/L
Pentachlorophenol	6	17	.00	1.20	.20	ug/L
Styrene	6	17	.00	14.40	2.40	ug/L
Tetrachloroethylene	6	17	.00	190.00	31.67	ug/L
Toluene	6	17	.00	15.60	2.60	ug/L
Trans-1,2-Dichloroethylene	6	17	.00	16.80	2.80	ug/L
Trans-1,3-Dichloropropylene	6	17	.00	44.00	7.33	ug/L
Trichloroethylene	6	17	.00	12.00	2.00	ug/L
Trichlorofluoromethane	6	17	.00	12.00	2.00	ug/L
Vinyl chloride	6	17	.00	116.00	19.33	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

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TABLE 2.16 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT JAMES RIVER-MARATHON LTD.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
m-Xylene and p-Xylene	6	17	.00	19.20	3.20	ug/L
o-Xylene	6	17	.00	16.80	2.80	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit ere treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.17
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT KIMBERLY-CLARK CANADA INC., HUNTSVILLE

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
BOD, 5 day, Total Demand	49	100	.70	4.90	2.81	mg/L
COD	118	100	22.00	124.00	74.24	mg/L
Chloroform	4	100	2.10	6.30	4.27	ug/L
Hydrogen ion (pH)	119	100	6.65	8.00	7.24	
Nitrate+Nitrite	4	100	.08	.27	.15	mg/L
Octachlorodibenzo-p-dioxin	2	100	.07	.57	.32	ng/L
Specific conductance	119	100	424.00	551.00	488.96	usiem/cm
Total Kjeldahl nitrogen	4	100	4.30	8.70	6.35	mg/L
Total phosphorus	4	100	.20	.30	.26	mg/L
Aluminum	17	53	.00	190.00	33.53	ug/L
Ammonia plus Ammonium	4	50	.00	.16	.07	mg/L
Copper	4	50	.00	30.00	10.00	ug/L
Hexachlorobutadiene	4	50	.00	.05	.02	ug/L
Total H6CDD	2	50	.00	.03	.02	ng/L
Total PCDD	2	50	.00	.03	.01	ng/L
Total TCDD	2	50	.00	.04	.02	ng/L
Zinc	17	47	.00	40.00	11.18	ug/L
Cadmium	4	25	.00	3.00	.75	ug/L
Chromium	4	25	.00	20.00	5.00	ug/L
Dehydroabietic Acid	4	25	.00	.01	.00	mg/L
Hexachloroethane	4	25	.00	.01	.00	ug/L
Lead	4	25	.00	30.00	7.50	ug/L
Methylene chloride	4	25	.00	8.50	2.13	ug/L
Oleic Acid	4	25	.00	.02	.01	mg/L
Trichlorofluoromethane	4	25	.00	1.80	.45	ug/L
Total suspended solids	119	13	.00	12.00	1.09	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
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TABLE 2.18
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,1-Dichloroethene	6	100	.25	2.24	.73	ug/L
2-Methylnaphthalene	6	100	1.20	9.20	3.47	ug/L
Aluminum	25	100	50.00	220.00	116.92	ug/L
BOD, 5 day, Total Demand	75	100	10.00	76.00	39.92	mg/L
COD	151	100	38.00	235.00	134.78	mg/L
Hydrogen ion (pH)	178	100	5.72	7.27	6.48	
Octachlorodibenzofuran	2	100	.15	.18	.17	ng/L
Specific conductance	178	100	330.00	628.00	411.97	usiem/cm
Tetrachloroethylene	6	100	.95	8.60	2.75	ug/L
Toluene	6	100	.14	4.34	1.57	ug/L
Total Kjeldahl nitrogen	6	100	1.00	4.00	2.43	mg/L
Total phosphorus	6	100	.08	.62	.21	mg/L
Trichloroethylene	6	100	1.00	33.30	10.33	ug/L
Zinc	23	100	10.00	9,290.00	863.48	ug/L
m-Xylene and p-Xylene	6	100	.41	4.43	1.36	ug/L
Ammonia plus Ammonium	6	83	.00	.18	.09	mg/L
Chloroform	6	83	.00	1.46	.45	ug/L
Copper	6	83	.00	11.00	5.13	ug/L
Methylene chloride	6	83	.00	3.65	1.43	ug/L
Naphthalene	6	83	.00	12.20	4.08	ug/L
Phenol	6	83	.00	10.70	3.33	ug/L
Total suspended solids	178	69	.00	22.00	6.43	mg/L
Nickel	6	67	.00	22.00	9.10	ug/L
o-Xylene	6	67	.00	1.64	.45	ug/L
1-Methylnaphthalene	6	50	.00	16.60	3.16	ug/L
Abietic Acid	6	50	.00	.13	.03	mg/L
Cadmium	6	50	.00	1.40	.67	ug/L
Dehydroabietic Acid	6	50	.00	.35	.08	mg/L
1,2-Dichloroethane	6	33	.00	.28	.06	ug/L
Chromium	6	33	.00	4.00	1.00	ug/L
Indole	6	33	.00	4.00	.80	ug/L
Lead	6	33	.00	18.00	5.00	ug/L
Molybdenum	6	33	.00	5.00	1.42	ug/L
Pimaric Acid	6	33	.00	.06	.01	mg/L
Total TCDF	3	33	.00	.02	.01	ng/L
Vanadium	6	33	.00	9.60	1.83	ug/L
1,2-Dichloropropane	6	17	.00	.06	.01	ug/L
2,4,6-Trichlorophenol	6	17	.00	1.00	.17	ug/L
2,4-Dimethylphenol	6	17	.00	3.50	.58	ug/L
Hexachlorocyclopentadiene	6	17	.00	.26	.04	ug/L
Isopimaric Acid	6	17	.00	.06	.01	mg/L
Levopimaric Acid	6	17	.00	.05	.01	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.18 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT KIMBERLY-CLARK CANADA INC., ST. CATHARINES

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Mercury	6	17	.00	.30	.05	ug/L
Nitrate+Nitrite	6	17	.00	.30	.05	mg/L
Oleic Acid	6	17	.00	.04	.01	mg/L
Silver	6	17	.00	3.00	.50	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit ere treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.19

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT KIMBERLY-CLARK CANADA INC., TERRACE BAY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4,6-Trichlorophenol	6	100	1.80	8.80	6.75	ug/L
Adsorbable Organic Halide	78	100	12.20	29.40	20.49	mg/L
Aluminum	26	100	330.00	700.00	465.00	ug/L
COD	181	100	104.00	1,774.40	553.27	mg/L
Chloroform	6	100	8.30	24.30	14.67	ug/L
Chromium	6	100	80.00	300.00	163.33	ug/L
Hydrogen ion (pH)	181	100	6.50	8.10	7.65	
Nickel	6	100	10.00	20.00	13.33	ug/L
Nitrate+Nitrite	26	100	.10	3.23	.41	mg/L
Specific conductance	181	100	1,000.00	2,600.00	1,836.60	usiem/cm
Sulphide	6	100	.01	4.14	.72	mg/L
Total Kjeldahl nitrogen	26	100	2.50	7.30	4.71	mg/L
Total TCDF	6	100	.21	.66	.36	ng/L
Total phosphorus	26	100	.33	.60	.51	mg/L
Total suspended solids	181	100	14.00	72.00	44.25	mg/L
VSS	25	100	15.00	77.50	40.52	mg/L
BOD, 5 day, Total Demand	78	99	.00	42.60	15.46	mg/L
Ammonia plus Ammonium	26	96	.00	2.02	.78	mg/L
Zinc	26	96	.00	120.00	86.54	ug/L
2,4-Dichlorophenol	6	83	.00	5.10	2.95	ug/L
Octachlorodibenzo-p-dioxin	6	83	.00	1.90	.49	ng/L
Total H7CDD	6	67	.00	.05	.02	ng/L
Total PCDF	6	67	.00	.09	.04	ng/L
Total TCDD	6	67	.00	.79	.18	ng/L
2,3,4,5-Tetrachlorophenol	2	50	.00	1.80	.90	ug/L
Dehydroabietic Acid	77	45	.00	.06	.01	mg/L
2,3,4,6-Tetrachlorophenol	3	33	.00	1.80	.60	ug/L
Abietic Acid	6	33	.00	.11	.02	mg/L
Mercury	6	33	.00	.10	.03	ug/L
Dichlorodehydroabietic Ac.	77	27	.00	.05	.01	mg/L
2-Methylnaphthalene	6	17	.00	2.90	.48	ug/L
Cadmium	6	17	.00	3.00	.50	ug/L
Chlorodehydroabietic Acid	6	17	.00	.01	.00	mg/L
Copper	6	17	.00	10.00	1.67	ug/L
Hexachlorobutadiene	6	17	.00	.01	.00	ug/L
Lead	6	17	.00	30.00	5.00	ug/L
Oleic Acid	6	17	.00	.01	.00	mg/L
Pentachlorophenol	6	17	.00	1.00	.17	ug/L
Pimaric Acid	6	17	.00	.01	.00	mg/L
Total H6CDF	6	17	.00	.04	.01	ng/L
Vanadium	6	17	.00	20.00	3.33	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.20a

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT MACMILLAN BLOEDEL LTD.

CONTROL POINT # 1200

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Aluminum	26	100	20.00	1,600.00	540.77	ug/L
BOD, 5 day, Total Demand	78	100	255.00	5,280.00	3,818.71	mg/L
Cadmium	6	100	25.00	140.00	59.17	ug/L
DOC	176	100	469.00	6,500.00	3,815.93	mg/L
Hydrogen ion (pH)	176	100	4.34	9.93	5.24	
Lead	6	100	11.00	110.00	75.17	ug/L
Nickel	6	100	23.00	100.00	58.83	ug/L
Nitrate+Nitrite	6	100	276.14	630.80	452.89	mg/L
Specific conductance	176	100	360.00	4,210.00	2,963.92	usiem/cm
Total Kjeldahl nitrogen	6	100	1.49	49.84	25.00	mg/L
Total phosphorus	6	100	1.42	3.07	2.15	mg/L
Total suspended solids	176	100	22.00	625.00	113.63	mg/L
Vanadium	6	100	20.00	180.00	82.50	ug/L
Zinc	26	100	116.00	1,631.00	882.04	ug/L
Chlorodehydroabietic Acid	6	83	.00	.58	.21	mg/L
Chromium	6	83	.00	68.00	29.00	ug/L
Cobalt	6	83	.00	70.00	42.50	ug/L
Copper	6	83	.00	110.00	49.00	ug/L
Isopimaric Acid	6	83	.00	3.84	1.00	mg/L
Dehydroabietic Acid	77	69	.00	3.19	.19	mg/L
Ammonia plus Ammonium	6	67	.00	27.30	8.17	mg/L
Pimaric Acid	6	67	.00	.18	.07	mg/L
Oleic Acid	6	50	.00	3.39	.69	mg/L
Silver	6	50	.00	140.00	28.67	ug/L
Benzene	6	33	.00	10.20	3.12	ug/L
Levopimaric Acid	6	33	.00	.82	.15	mg/L
Neoabietic Acid	6	33	.00	.23	.07	mg/L
Phenol	6	33	.00	500.00	84.33	ug/L
Abietic Acid	6	17	.00	.18	.03	mg/L
Molybdenum	6	17	.00	40.00	6.67	ug/L
Thallium	6	17	.00	70.00	11.67	ug/L
Toluene	6	17	.00	4.30	.72	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.20b
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT MACMILLAN BLOEDEL LTD.
CONTROL POINT # 1300

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Aluminum	26	100	470.00	5,340.00	2,153.46	ug/L
BOD, 5 day, Total Demand	77	100	340.00	2,890.00	1,614.36	mg/L
DOC	177	100	540.00	2,780.00	1,583.90	mg/L
Hydrogen ion (pH)	177	100	4.11	7.03	5.19	
Nickel	6	100	10.00	80.00	32.17	ug/L
Nitrate+Nitrite	7	100	94.30	363.30	166.37	mg/L
Specific conductance	177	100	400.00	2,120.00	809.21	usiem/cm
Total phosphorus	7	100	.95	2.66	1.79	mg/L
Total suspended solids	177	100	87.00	502.00	263.16	mg/L
VSS	1	100	253.00	253.00	253.00	mg/L
Zinc	26	100	224.00	660.00	350.46	ug/L
Total Kjeldahl nitrogen	7	86	.00	52.45	22.21	mg/L
Cadmium	6	83	.00	42.00	22.47	ug/L
Vanadium	6	83	.00	100.00	50.00	ug/L
Dehydroabietic Acid	78	76	.00	1.23	.17	mg/L
Ammonia plus Ammonium	7	71	.00	24.48	8.87	mg/L
Chromium	6	67	.00	68.00	28.00	ug/L
Isopimaric Acid	6	67	.00	2.50	.81	mg/L
Levopimaric Acid	6	67	.00	3.94	.93	mg/L
Oleic Acid	6	67	.00	.54	.17	mg/L
Benzene	6	50	.00	39.00	8.88	ug/L
Cobalt	6	50	.00	40.00	15.00	ug/L
Copper	6	50	.00	140.00	42.67	ug/L
Lead	6	50	.00	130.00	33.33	ug/L
Pimaric Acid	6	50	.00	.30	.10	mg/L
Silver	6	50	.00	90.00	20.00	ug/L
Toluene	6	50	.00	120.00	22.65	ug/L
Phenol	6	33	.00	30.00	5.50	ug/L
Abietic Acid	6	17	.00	.10	.02	mg/L
Chlorodehydroabietic Acid	6	17	.00	.20	.03	mg/L
Molybdenum	6	17	.00	30.00	5.00	ug/L
Thallium	6	17	.00	20.00	3.33	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.21
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT MALETTE KRAFT PULP AND POWER

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Adsorbable Organic Halide	75	100	7.10	65.00	25.56	mg/L
Aluminum	24	100	910.00	5,200.00	3,460.42	ug/L
Ammonia plus Ammonium	21	100	.30	1.15	.84	mg/L
BOD, 5 day, Total Demand	76	100	84.00	480.00	165.88	mg/L
COD	176	100	20.00	3,840.00	592.21	mg/L
Chlorodehydroabietic Acid	6	100	.04	.11	.06	mg/L
Chloroform	5	100	13.50	146.00	96.30	ug/L
Hydrogen ion (pH)	176	100	2.30	10.80	4.52	
Isopimaric Acid	6	100	.04	.52	.23	mg/L
Phenol	6	100	19.10	40.00	26.50	ug/L
Specific conductance	176	100	700.00	2,870.00	1,614.14	usiem/cm
Toluene	5	100	.24	5.10	2.89	ug/L
Total Kjeldahl nitrogen	21	100	1.46	2.80	2.04	mg/L
Total phosphorus	21	100	.20	.57	.37	mg/L
Total suspended solids	176	100	10.00	63.00	29.91	mg/L
Zinc	24	100	25.00	250.00	120.21	ug/L
m-Cresol	6	100	11.30	32.00	24.68	ug/L
p-Cresol	6	100	1.50	5.80	3.73	ug/L
Dichlorodehydroabietic Ac.	75	99	.00	.72	.13	mg/L
Dehydroabietic Acid	75	97	.00	6.60	.41	mg/L
Nitrate+Nitrite	21	95	.00	2.50	.45	mg/L
2,4,5-Trichlorotoluene	6	83	.00	.02	.01	ug/L
Abietic Acid	6	83	.00	.66	.29	mg/L
Cadmium	6	83	.00	3.40	1.60	ug/L
Camphene	6	83	.00	34.00	14.48	ug/L
Chromium	6	83	.00	50.00	21.17	ug/L
Copper	6	83	.00	23.00	12.33	ug/L
Lead	6	83	.00	28.00	10.12	ug/L
Molybdenum	6	83	.00	12.00	8.17	ug/L
Nickel	6	83	.00	160.00	36.50	ug/L
Pimaric Acid	6	83	.00	.08	.04	mg/L
Sulphide	6	83	.00	.51	.13	mg/L
Vanadium	6	83	.00	12.00	9.33	ug/L
o-Cresol	6	83	.00	5.10	2.78	ug/L
Styrene	5	80	.00	2.40	1.43	ug/L
2,4,6-Trichlorophenol	6	67	.00	11.20	5.52	ug/L
2,4-Dichlorophenol	6	67	.00	6.10	3.10	ug/L
Beryllium	6	67	.00	12.00	6.83	ug/L
Cobalt	6	67	.00	22.00	12.67	ug/L
Neoabietic Acid	6	67	.00	.14	.05	mg/L
Thallium	6	67	.00	28.00	18.67	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.21 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT MALETTE KRAFT PULP AND POWER

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Total TCDF	6	67	.00	.54	.15	ng/L
Methylene chloride	5	60	.00	23.00	7.36	ug/L
1,2,4-Trichlorobenzene	6	50	.00	.04	.01	ug/L
2,4-Dimethylphenol	6	50	.00	1.80	.70	ug/L
Hexachlorocyclopentadiene	6	50	.00	.03	.01	ug/L
Mercury	6	50	.00	.11	.05	ug/L
Silver	6	50	.00	10.00	3.67	ug/L
Benzene	5	40	.00	.54	.18	ug/L
Chloromethane	5	40	.00	15.80	4.92	ug/L
m-Xylene and p-Xylene	5	40	.00	.26	.10	ug/L
2,3,5,6-Tetrachlorophenol	6	33	.00	6.20	1.50	ug/L
4-Chloro-3-methylphenol	6	33	.00	.50	.12	ug/L
Levopimaric Acid	6	33	.00	.03	.01	mg/L
Naphthalene	6	33	.00	.30	.08	ug/L
1,4-Dichlorobenzene	5	20	.00	.44	.09	ug/L
Bromomethane	5	20	.00	84.00	16.80	ug/L
o-Xylene	5	20	.00	.54	.11	ug/L
2,3,7,8 TCDD	6	17	.00	.01	.00	ng/L
2-Chlorophenol	6	17	.00	2.20	.37	ug/L
Hexachlorobenzene	6	17	.00	.01	.00	ug/L
Hexachloroethane	6	17	.00	.01	.00	ug/L
Octachlorodibenzo-p-dioxin	6	17	.00	.02	.00	ng/L
Octachlorodibenzofuran	6	17	.00	.02	.00	ng/L
Pentachlorophenol	6	17	.00	2.70	.45	ug/L
Pyrene	6	17	.00	.70	.12	ug/L
Total H6CDD	6	17	.00	.02	.00	ng/L
Total H6CDF	6	17	.00	.02	.00	ng/L
Total H7CDD	6	17	.00	.00	.00	ng/L
Total H7CDF	6	17	.00	.02	.00	ng/L
Total PCDD	6	17	.00	.02	.00	ng/L
Total PCDF	6	17	.00	.01	.00	ng/L
Total TCDD	6	17	.00	.01	.00	ng/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.22
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Adsorbable Organic Halide	5	100	1.24	20.40	5.61	mg/L
Aluminum	24	100	920.00	18,300.00	5,723.75	ug/L
Ammonia plus Ammonium	24	100	.03	.68	.16	mg/L
BOD, 5 day, Total Demand	176	100	50.00	280.00	150.82	mg/L
Bromodichloromethane	5	100	3.00	6.30	4.92	ug/L
Chloroform	5	100	64.00	190.00	94.40	ug/L
DOC	173	100	39.00	148.00	83.73	mg/L
Dehydroabietic Acid	5	100	.30	.65	.49	mg/L
Hexachlorocyclopentadiene	5	100	.10	.41	.23	ug/L
Nitrate+Nitrite	24	100	.35	.97	.62	mg/L
Specific conductance	176	100	98.00	1,410.00	905.32	usiem/cm
Total Kjeldahl nitrogen	24	100	.54	3.30	1.48	mg/L
Total phosphorus	5	100	.06	.19	.11	mg/L
Zinc	24	100	12.00	230.00	91.21	ug/L
m-Xylene and p-Xylene	5	100	1.00	6.40	3.13	ug/L
Chromium	6	83	.00	182.00	43.33	ug/L
Copper	6	83	.00	28.00	15.33	ug/L
Lead	6	83	.00	40.00	11.67	ug/L
Nickel	6	83	.00	9.00	6.00	ug/L
Dibromochloromethane	5	80	.00	1.27	.86	ug/L
o-Xylene	5	80	.00	3.05	1.48	ug/L
Cadmium	6	67	.00	3.00	.78	ug/L
Vanadium	6	67	.00	12.00	6.83	ug/L
1,2,4-Trichlorobenzene	5	60	.00	.01	.00	ug/L
Octachlorodibenzo-p-dioxin	5	60	.00	.39	.12	ng/L
1,2,3-Trichlorobenzene	5	40	.00	.00	.00	ug/L
2,4,5-Trichlorotoluene	5	40	.00	.01	.00	ug/L
Benzene	5	40	.00	6.90	1.82	ug/L
Bromomethane	5	40	.00	4.40	1.60	ug/L
Methylene chloride	5	40	.00	13.10	2.83	ug/L
Phenanthrene	5	40	.00	1.39	.49	ug/L
Styrene	5	40	.00	.73	.20	ug/L
Toluene	5	40	.00	.32	.13	ug/L
Mercury	6	33	.00	.10	.03	ug/L
Molybdenum	6	33	.00	8.00	2.17	ug/L
1,1-Dichloroethylene	5	20	.00	2.10	.42	ug/L
2,4,6-Trichlorophenol	5	20	.00	.44	.09	ug/L
Chlorobenzene	5	20	.00	.28	.06	ug/L
Chloromethane	5	20	.00	1.07	.21	ug/L
Fluorene	5	20	.00	1.60	.32	ug/L
Hexachloroethane	5	20	.00	.00	.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.22 (continued)

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT NORANDA FOREST INC., RECYCLED PAPERS

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Oleic Acid	5	20	.00	.02	.00	mg/L
Total H7CDD	5	20	.00	.07	.01	ng/L
m-Cresol	5	20	.00	1.50	.30	ug/L
Beryllium	6	17	.00	20.00	3.33	ug/L
Cobalt	6	17	.00	8.00	1.33	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.23
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT QUEBEC AND ONTARIO PAPER COMPANY LTD.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Ammonia plus Ammonium	25	100	.00	3.60	1.06	mg/L
BOD, 5 dey, Total Demand	75	100	8.00	36.00	18.59	mg/L
Copper	6	100	12.00	60.00	26.50	ug/L
DOC	177	100	8.10	48.00	29.07	mg/L
Hydrogen ion (pH)	177	100	6.90	8.20	7.29	
Nitrete+Nitrite	25	100	.10	1.04	.26	mg/L
Specific conductance	177	100	390.00	1,210.00	706.23	usiem/cm
Total Kjeldahl nitrogen	25	100	1.22	8.60	3.01	mg/L
Total phosphorus	25	100	.03	1.16	.39	mg/L
VSS	25	100	18.00	73.00	37.48	mg/L
Zinc	25	100	36.00	300.00	178.24	ug/L
Total suspended solids	177	99	.00	275.00	48.50	mg/L
Aluminum	25	96	.00	5,000.00	797.92	ug/L
Vanedium	6	83	.00	30.00	10.67	ug/L
Bromomethane	6	67	.00	17.30	4.13	ug/L
Chloroform	6	67	.00	3.10	1.07	ug/L
Chromium	6	67	.00	30.00	9.83	ug/L
Nickel	6	67	.00	10.00	5.83	ug/L
Toluene	6	67	.00	25.00	7.51	ug/L
1,2,4-Trichlorobenzene	6	50	.00	.01	.01	ug/L
Cadmium	6	50	.00	.70	.32	ug/L
Lead	6	50	.00	5.00	2.17	ug/L
Dehydroabietic Acid	76	36	.00	.36	.01	mg/L
1,2,3,4-Tetrachlorobenzene	6	33	.00	.02	.00	ug/L
2,4,5-Trichlorotoluene	6	33	.00	.02	.01	ug/L
Benzene	6	33	.00	1.20	.33	ug/L
Chlorodehydroabietic Acid	6	33	.00	.01	.00	mg/L
Chloromethane	6	33	.00	14.40	3.18	ug/L
Methylene chloride	6	33	.00	12.60	2.34	ug/L
Hexachlorocyclopentadiene	6	17	.00	.01	.00	ug/L
Indole	6	17	.00	.66	.11	ug/L
Isopimaric Acid	6	17	.00	.02	.00	mg/L
Mercury	6	17	.00	.05	.01	ug/L
Molybdenum	6	17	.00	5.00	.83	ug/L
Oleic Acid	6	17	.00	.07	.01	mg/L
Phenol	6	17	.00	.50	.08	ug/L
o-Xylene	6	17	.00	.19	.03	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.24
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ST. MARYS PAPER INC.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	7	100	.05	1.50	.81	mg/L
Aluminum	26	100	640.00	6,500.00	2,180.38	ug/L
Ammonia plus Ammonium	6	100	.06	.12	.08	mg/L
BOD, 5 day, Total Demand	76	100	36.60	374.00	171.46	mg/L
COD	177	100	310.00	2,800.00	703.16	mg/L
Dehydroabietic Acid	77	100	.02	12.00	2.08	mg/L
Hydrogen ion (pH)	181	100	5.70	7.50	6.69	
Nitrate+Nitrite	6	100	.05	.11	.07	mg/L
Pimaric Acid	7	100	.08	.41	.24	mg/L
Specific conductance	180	100	22.00	480.00	261.22	usiem/cm
Toluene	7	100	.73	3.70	1.71	ug/L
Total Kjeldahl nitrogen	6	100	.82	1.96	1.07	mg/L
Total phosphorus	6	100	.54	1.15	.78	mg/L
Total suspended solids	181	100	90.00	606.00	181.54	mg/L
Zinc	26	100	.01	185.00	54.46	ug/L
Isopimaric Acid	7	86	.00	1.69	.75	mg/L
Levopimaric Acid	7	86	.00	.86	.37	mg/L
Neoabietic Acid	7	86	.00	.71	.33	mg/L
Naphthalene	6	83	.00	4.00	1.78	ug/L
Methylene chloride	7	71	.00	37.10	10.01	ug/L
Copper	6	67	.00	16.00	8.00	ug/L
Lead	6	67	.00	67.00	13.83	ug/L
Octachlorodibenzo-p-dioxin	3	67	.00	.43	.19	ng/L
Phenol	6	67	.00	7.00	2.59	ug/L
Vanadium	6	67	.00	14.00	6.83	ug/L
p-Cresol	6	67	.00	28.00	7.73	ug/L
Chloroform	7	57	.00	2.60	1.20	ug/L
Oleic Acid	7	57	.00	.09	.02	mg/L
1,2,4-Trichlorobenzene	6	50	.00	.01	.00	ug/L
Cadmium	6	50	.00	.40	.17	ug/L
Chromium	6	50	.00	11.00	5.00	ug/L
Hexachlorobenzene	6	50	.00	.01	.00	ug/L
Benzene	7	43	.00	3.00	.75	ug/L
Chloromethane	7	43	.00	18.00	5.29	ug/L
m-Xylene and p-Xylene	7	43	.00	1.75	.40	ug/L
o-Xylene	7	43	.00	.31	.10	ug/L
Camphene	6	33	.00	.40	.12	ug/L
m-Cresol	6	33	.00	3.80	.98	ug/L
Chlorodehydroabietic Acid	7	29	.00	.03	.01	mg/L
1,2,3,4-Tetrachlorobenzene	6	17	.00	.00	.00	ug/L
1,2,3-Trichlorobenzene	6	17	.00	.00	.00	ug/L
2,4,5-Trichlorotoluene	6	17	.00	.00	.00	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.24 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT ST. MARYS PAPER INC.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
2,4-Dichlorophenol	6	17	.00	.50	.08	ug/L
4-Nitrophenol	6	17	.00	6.00	1.00	ug/L
Fluoranthene	6	17	.00	.50	.08	ug/L
Nickel	6	17	.00	6.00	1.00	ug/L
Pyrene	6	17	.00	.40	.07	ug/L
o-Cresol	6	17	.00	.40	.07	ug/L
Bromomethane	7	14	.00	8.20	1.17	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.25

PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT SPRUCE FALLS POWER AND PAPER COMPANY LTD.

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Abietic Acid	6	100	.67	2.88	1.43	mg/L
Aluminum	26	100	70.00	710.00	223.46	ug/L
BOD, 5 day, Total Demand	78	100	237.00	675.00	403.35	mg/L
COD	178	100	360.00	1,900.00	908.31	mg/L
Conductivity, average	180	100	138.00	421.00	264.57	usiem/cm
Conductivity, maximum	180	100	250.00	1,000.00	573.58	usiem/cm
Conductivity, minimum	180	100	.00	330.00	188.72	usiem/cm
Copper	6	100	10.00	30.00	16.67	ug/L
Dehydroabietic Acid	78	100	1.02	4.12	2.03	mg/L
Hydrogen ion (pH)	178	100	4.09	7.48	5.93	
Isopimaric Acid	6	100	.23	.91	.46	mg/L
Neoabietic Acid	6	100	.46	3.26	1.75	mg/L
Octachlorodibenzo-p-dioxin	3	100	.22	.79	.58	ng/L
Oleic Acid	6	100	.09	.41	.20	mg/L
Specific conductance	1	100	307.00	307.00	307.00	usiem/cm
Total Kjeldahl nitrogen	6	100	.23	1.80	1.46	mg/L
Total suspended solids	178	100	43.00	352.00	100.74	mg/L
Zinc	26	100	90.00	160.00	119.23	ug/L
Pimaric Acid	6	83	.00	.26	.10	mg/L
Total phosphorus	6	83	.00	.45	.24	mg/L
Chloroform	6	67	.00	6.10	3.38	ug/L
Toluene	6	67	.00	4.80	2.60	ug/L
Phenol	6	50	.00	2.60	.97	ug/L
Ammonia plus Ammonium	6	33	.00	.16	.04	mg/L
Camphene	6	33	.00	7.60	1.57	ug/L
Chlorodehydroabietic Acid	6	33	.00	.07	.02	mg/L
Lead	6	33	.00	30.00	10.00	ug/L
Nitrate+Nitrite	6	33	.00	.08	.03	mg/L
Octachlorodibenzofuran	3	33	.00	.05	.02	ng/L
Cadmium	6	17	.00	3.00	.50	ug/L
Chromium	6	17	.00	20.00	3.33	ug/L
Nickel	6	17	.00	10.00	1.67	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.26
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT STRATHCONA PAPER COMPANY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Ammonia plus Ammonium	26	100	.08	2.70	.83	mg/L
BOD, 5 day, Total Demand	76	100	37.00	310.00	164.01	mg/L
COD	178	100	170.00	800.00	526.40	mg/L
Dehydroabietic Acid	6	100	.03	.40	.16	mg/L
Hydrogen ion (pH)	178	100	6.42	7.87	7.12	
Phenol	6	100	2.80	26.00	14.87	ug/L
Specific conductance	178	100	600.00	795.00	695.24	usiem/cm
Toluene	6	100	.42	6.00	2.06	ug/L
Total Kjeldahl nitrogen	26	100	.91	14.50	10.33	mg/L
Total phosphorus	26	100	.21	.70	.45	mg/L
Total suspended solids	178	100	23.00	109.00	60.95	mg/L
VSS	26	100	6.00	92.00	55.62	mg/L
p-Cresol	6	100	10.40	65.00	32.23	ug/L
Aluminum	26	96	.00	5,400.00	1,075.00	ug/L
Zinc	26	85	.00	110.00	21.50	ug/L
Chloroform	6	83	.00	10.00	3.95	ug/L
Nitrate+Nitrite	26	77	.00	.06	.02	mg/L
Copper	6	67	.00	29.00	9.50	ug/L
Vanadium	6	67	.00	22.00	10.67	ug/L
m-Cresol	6	67	.00	9.10	4.77	ug/L
Bromomethane	6	50	.00	26.00	6.44	ug/L
Cadmium	6	50	.00	.60	.22	ug/L
Chloromethane	6	50	.00	33.00	9.05	ug/L
Chromium	6	50	.00	18.00	5.83	ug/L
Methylene chloride	6	50	.00	4.70	1.63	ug/L
Pimaric Acid	6	50	.00	.07	.02	mg/L
1,2,4-Trichlorobenzene	6	33	.00	.00	.00	ug/L
Abietic Acid	6	33	.00	.03	.01	mg/L
Lead	6	33	.00	4.00	1.17	ug/L
Molybdenum	6	33	.00	26.00	5.67	ug/L
Neoabietic Acid	6	33	.00	.04	.01	mg/L
Nickel	6	33	.00	9.00	2.83	ug/L
Oleic Acid	6	33	.00	.20	.04	mg/L
m-Xylene and p-Xylene	6	33	.00	.50	.14	ug/L
1,2,3,4-Tetrachlorobenzene	6	17	.00	.00	.00	ug/L
2,4,5-Trichlorotoluene	6	17	.00	.00	.00	ug/L
4-Chloro-3-methylphenol	6	17	.00	.30	.05	ug/L
Benzene	6	17	.00	.41	.07	ug/L
Benzo(a)pyrene	6	17	.00	1.76	.29	ug/L
Chlorodehydroabietic Acid	6	17	.00	.03	.00	mg/L
Indole	6	17	.00	4.00	.67	ug/L
Isopimaric Acid	6	17	.00	.06	.01	mg/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

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TABLE 2.26 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT STRATHCONA PAPER COMPANY

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
Pentachlorobenzene	6	17	.00	.01	.00	ug/L
Pentachlorophenol	6	17	.00	3.50	.58	ug/L
o-Cresol	6	17	.00	.63	.11	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.27
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
1,1-Dichloroethylene	7	100	4.20	55.00	15.56	ug/L
Aluminum	26	100	610.00	8,200.00	4,185.38	ug/L
Ammonia plus Ammonium	6	100	.03	.43	.15	mg/L
BOD, 5 day, Total Demand	79	100	230.00	800.00	423.67	mg/L
COD	177	100	490.00	2,868.00	955.68	mg/L
Dehydroabietic Acid	6	100	.08	3.60	.98	mg/L
Hydrogen ion (pH)	178	100	4.70	7.25	6.69	
Isopimaric Acid	6	100	.01	.09	.05	mg/L
Nitrate+Nitrite	6	100	.02	.32	.14	mg/L
Specific conductance	156	100	576.00	1,300.00	869.53	usiem/cm
Toluene	7	100	1.10	5.80	3.13	ug/L
Total Kjeldahl nitrogen	6	100	2.20	5.90	4.00	mg/L
Total phosphorus	6	100	.17	.60	.33	mg/L
Total suspended solids	178	100	25.00	909.00	141.79	mg/L
Zinc	26	96	.00	620.00	153.23	ug/L
1,1-Dichloroethane	7	86	.00	2.70	.97	ug/L
Abietic Acid	6	83	.00	.25	.08	mg/L
Chromium	6	83	.00	30.00	14.67	ug/L
Copper	6	83	.00	24.00	11.17	ug/L
Nickel	6	83	.00	25.00	11.17	ug/L
Vanadium	6	83	.00	18.00	12.83	ug/L
Phenol	5	80	.00	178.00	82.60	ug/L
m-Cresol	5	80	.00	40.00	15.08	ug/L
p-Cresol	5	80	.00	6.00	3.24	ug/L
m-Xylene and p-Xylene	7	71	.00	.92	.36	ug/L
1,2,4-Trichlorobenzene	6	67	.00	.01	.00	ug/L
Cadmium	6	67	.00	3.00	.97	ug/L
Leed	6	67	.00	40.00	9.17	ug/L
1,4-Dichlorobenzene	7	57	.00	.31	.15	ug/L
Chloroform	7	57	.00	4.00	1.33	ug/L
Chloromethene	7	57	.00	32.00	7.96	ug/L
Tetrechloroethylene	7	57	.00	.53	.24	ug/L
o-Xylene	7	57	.00	.69	.21	ug/L
Naphthalene	6	50	.00	3.70	1.20	ug/L
Benzene	7	43	.00	5.60	1.11	ug/L
Bromomethane	7	43	.00	6.20	1.79	ug/L
Styrene	7	43	.00	.54	.18	ug/L
Pentachlorophenol	5	40	.00	3.40	1.20	ug/L
o-Cresol	5	40	.00	1.43	.47	ug/L
Pimaric Acid	6	33	.00	.02	.00	mg/L
1,3-Dichlorobenzene	7	29	.00	.29	.08	ug/L
Methylene chloride	7	29	.00	9.80	2.34	ug/L

No. = NUMBER OF ANALYSES
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AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 2.27 (continued)
PRIORITY POLLUTANTS DETECTED IN PROCESS EFFLUENT AT TRENT VALLEY DIVISION (PAPERBOARD INDUSTRIES CORP.)

PARAMETER	No.	F.D.(%)	MIN	MAX	AVG	UNIT
4-Chloro-3-methylphenol	5	20	.00	.44	.09	ug/L
5-nitro, Acenaphthene	6	17	.00	5.30	.88	ug/L
Cobalt	6	17	.00	6.00	1.00	ug/L
Levopimaric Acid	6	17	.00	.19	.03	mg/L
Neoabietic Acid	6	17	.00	.03	.01	mg/L
Oleic Acid	6	17	.00	.02	.00	mg/L
Thallium	6	17	.00	12.00	2.00	ug/L
1,2-Dichloropropane	7	14	.00	.45	.06	ug/L

No. = NUMBER OF ANALYSES
F.D. = FREQUENCY OF DETECTION ABOVE THE LABORATORY METHOD DETECTION LIMIT (%)
MIN = MINIMUM CONCENTRATION
MAX = MAXIMUM CONCENTRATION
AVG = AVERAGE CONCENTRATION IN THE PERIOD JANUARY 1 - JUNE 30, 1990
UNIT = UNIT OF MEASUREMENT

NOTE: Values less than the detection limit are treated as zero.
Minimum, maximum and average values are cited to two decimal places.

TABLE 3.1
PROCESS EFFLUENT
MONTHLY AVERAGE FLOW (m3/day) FOR ALL PULP AND PAPER MILLS WITH ONE PROCESS EFFLUENT STREAM

MILL	JAN 90	FEB 90	MAR 90	APR 90	MAY 90	JUN 90
ABITIBI-P (I. Falls)	62,187	60,930	56,932	59,897	64,782	69,768
ABITIBI-P (Prov. P)	51,404	53,243	49,687	45,094	41,933	42,229
ABITIBI-P (T. Bay)	46,309	45,570	44,541	41,326	44,711	47,411
BEAVER WOOD FIBRE	15,650	15,143	15,400	14,308	15,319	15,057
BOISE (Ft. Frances)	77,853	77,868	76,111	71,696	77,617	82,558
BOISE (Kenora)	46,123	48,642	45,344	46,509	49,367	50,870
CP FOREST (Dryden)	92,871	91,571	81,161	92,733	92,548	99,633
CP FOREST (T. Bay)	165,484	175,679	164,516	169,000	183,226	186,083
DOMTAR (Cornwall)	124,330	122,446	127,161	127,602	124,181	132,379
DOMTAR (Red Rock)	96,528	92,311	94,978	97,100	94,912	95,070
DOMTAR (St. Cath)	10,366	10,758	10,265	10,962	9,925	10,935
DOMTAR (Trenton)	3,825	3,950	3,865	3,948	4,169	4,330
E.B. EDDY (Espanola)	104,031	97,565	96,796	58,329	114,852	118,824
E.B. EDDY (Ottawa)	8,747	8,032	7,271	7,147	7,197	6,909
JAMES RIVER-MARATHON	62,052	60,870	59,667	61,676	61,327	65,580
KIMBERLY-C (Hunts.)	868	858	805	984	0	0
KIMBERLY-C (St Cath)	8,618	8,081	7,745	6,917	7,422	7,608
KIMBERLY-C (Terr. B)	107,065	101,456	100,365	84,033	86,965	90,969
MALETTE	47,922	49,309	50,016	50,041	49,287	54,205
NORANDA FOREST	20,716	20,963	21,118	21,206	20,404	22,989
QUEBEC AND ONTARIO	58,173	55,164	56,642	62,893	65,795	65,113
ST. MARYS PAPER	32,513	32,936	33,436	34,419	32,387	34,360
SPRUCE FALLS	74,932	77,668	79,439	78,759	71,974	90,423
STRATHCONA	3,505	3,655	3,884	4,488	3,928	3,744
TRENT VALLEY (PBI)	3,274	4,035	3,460	3,684	3,801	3,731

TABLE 3.2
PROCESS EFFLUENT
MONTHLY AVERAGE FLOW (m3/day) FOR PULP AND PAPER MILLS WITH TWO PROCESS EFFLUENT STREAMS

MILL	CTRLPT	JAN 90	FEB 90	MAR 90	APR 90	MAY 90	JUN 90
ABITIBI-P (Ft. Will)	0100	22,007	21,522	21,973	21,500	21,176	22,080
ABITIBI-P (Ft. Will)	0200	3,672	4,472	4,101	3,084	4,423	●
MACMILLAN BLOEDEL	1200	6,888	6,234	5,677	6,904	7,331	7,659
MACMILLAN BLOEDEL	1300	7,568	7,761	6,998	7,025	6,484	6,067

● = missing data

TABLE 4.0
AVERAGE DAILY LOADING (kg/day)
FOR DAILY, THRICE WEEKLY AND WEEKLY PARAMETERS
(JANUARY 1 - JUNE 30, 1990)

MILL	ALUMINUM	AOX	BOD5	COD	DOC	AMMONIA+ AMMONIUM	NITRATE+ NITRITE	TOTAL KJELDAHL NITROGEN	PHOSPHORUS	DICHLORO-DEHYDRO-ABIETIC ACID	DEHYDRO-ABIETIC ACID	TOTAL SUSPENDED SOLIDS	VOLATILE SUSPENDED SOLIDS	ZINC
A-P (I.Falls)	195.1		55877		49621	8.4	14.6	194.0	32.6		247.9	7666		9.4
A-P (Ft. Will)	16.1		14197		10304	2.9	1.8	75.1	12.0		89.8	1198		1.5
A-P (Prov. P)	96.6		4108		2907	14.4	14.3	55.1	3.6		17.0	1616		1.8
A-P (T. Bay)	46.5		27576		27781	2.3	11.9	77.3	9.2		71.1	1942		2.7
Beaver Wood	13.7		1808		1043	0.8	2.8	33.2	1.2		6.0	726		0.4
Boise (Ft. F)	92.6	2044	9760	54762		7.0	13.7	741.6	136.0	9.8	20.2	10853	10169	13.7
Boise (Kenora)	12.2		35468	103244		0.2	14.7	109.2	13.8		206.3	3424		3.0
CPFP (Dryden)	117.0	2340	3155	53719		84.2	91.7	175.0	188.7	9.6	3.7	5501	5298	9.9
CPFP (T. Bay)	910.4	4170	48734	172593		7.4	0.6	252.9	117.6	9.3	309.2	16176		31.1
Domtar (Cnwall)	170.1	401	21869	64413		77.9	23.0	355.1	42.6	1.8	57.8	10011		5.7
Domtar (R.R.)	332.7	177	15755	42368		42.7	7.4	178.2	22.1	2.8	123.9	6241		4.1
Domtar (St. C)	21.3		1189	14896		0.6	4.2	19.5	0.2		10.9	417		0.2
Domtar (Tren)	12.1		5203	10293		0.7	1.8	24.0	3.8		4.6	588		0.6
Eddy (Espanola)	85.1	842	1839		11787	84.1	7.5	324.7	51.5	0.0	0.8	3026	2129	8.1
Eddy (Ottawa)	20.8		1168	2910		2.2	2.3	30.9	0.9		3.6	566		0.1
James River	16.1	3563	12535	48267		155.2	397.0	190.6	41.3	4.2	4.0	2583		4.7
K-C (Hunts)	0.0		2	65		0.1	0.1	5.8	0.2		0.0	1		0.0
K-C (St. C)	0.9		301	1006		0.7	0.5	19.5	1.7		0.6	50		7.2
K-C (Terr. B)	43.3	1970	1500	52690		70.9	38.8	441.2	47.3	0.6	0.7	4145	3739	8.2
Macmillan	19.7		36915		36892	123.3	4236.4	327.8	27.8		2.5	2546	1602	8.6
Malette	173.9	1295	8373	29475		42.0	22.9	102.6	18.7	6.6	20.9	1498		6.1
Noranda	120.7	115	3217		1787	3.2	13.1	31.0	2.3		9.6			2.0
Q & O	50.7		1136		1753	64.1	16.1	181.6	24.5		0.9	2904	2260	10.9
St. Marys	73.2		5733	23437		2.7	2.3	36.9	26.6		69.4	6042		1.8
Spruce Falls	17.6		31643	71347		3.4	2.1	120.6	20.0		158.0	7904		9.5
Strathcona	4.6		634	2054		3.2	0.1	39.3	1.7		0.6	238	224	0.1
Trent Valley	14.5		1495	3493		0.5	0.5	13.7	1.1		3.5	526		0.5
TOTALS:	2677.5	16918	351192	751032	143875	805.0	4941.9	4156.3	849.2	44.7	1443.2	98386	25420	152.0

Figure 1.1
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of 5-Day Biological Oxygen Demand

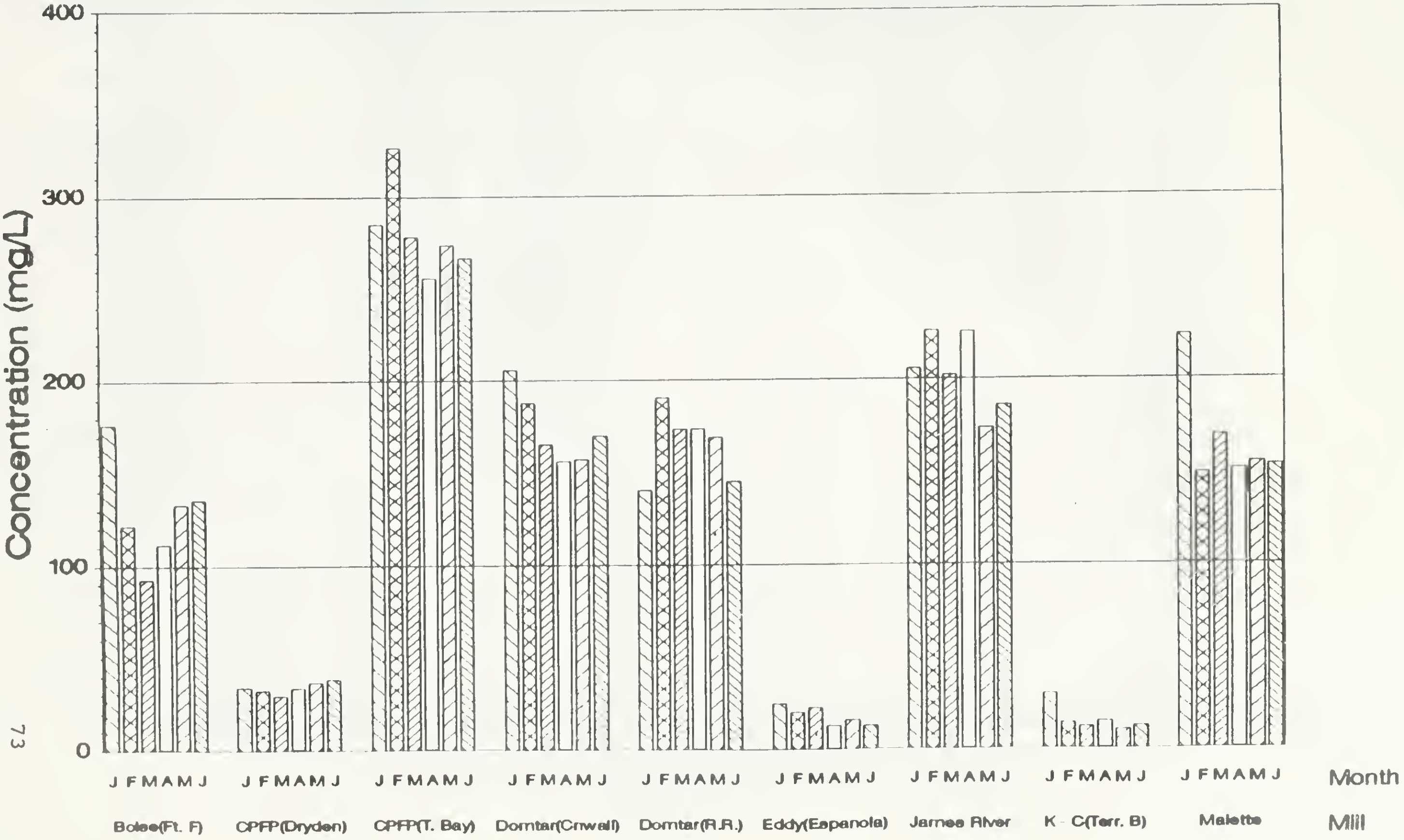


Figure 1.2

Sulphite – Mechanical Mill Process Effluent

Monthly Average Concentration of 5 – Day Biological Oxygen Demand

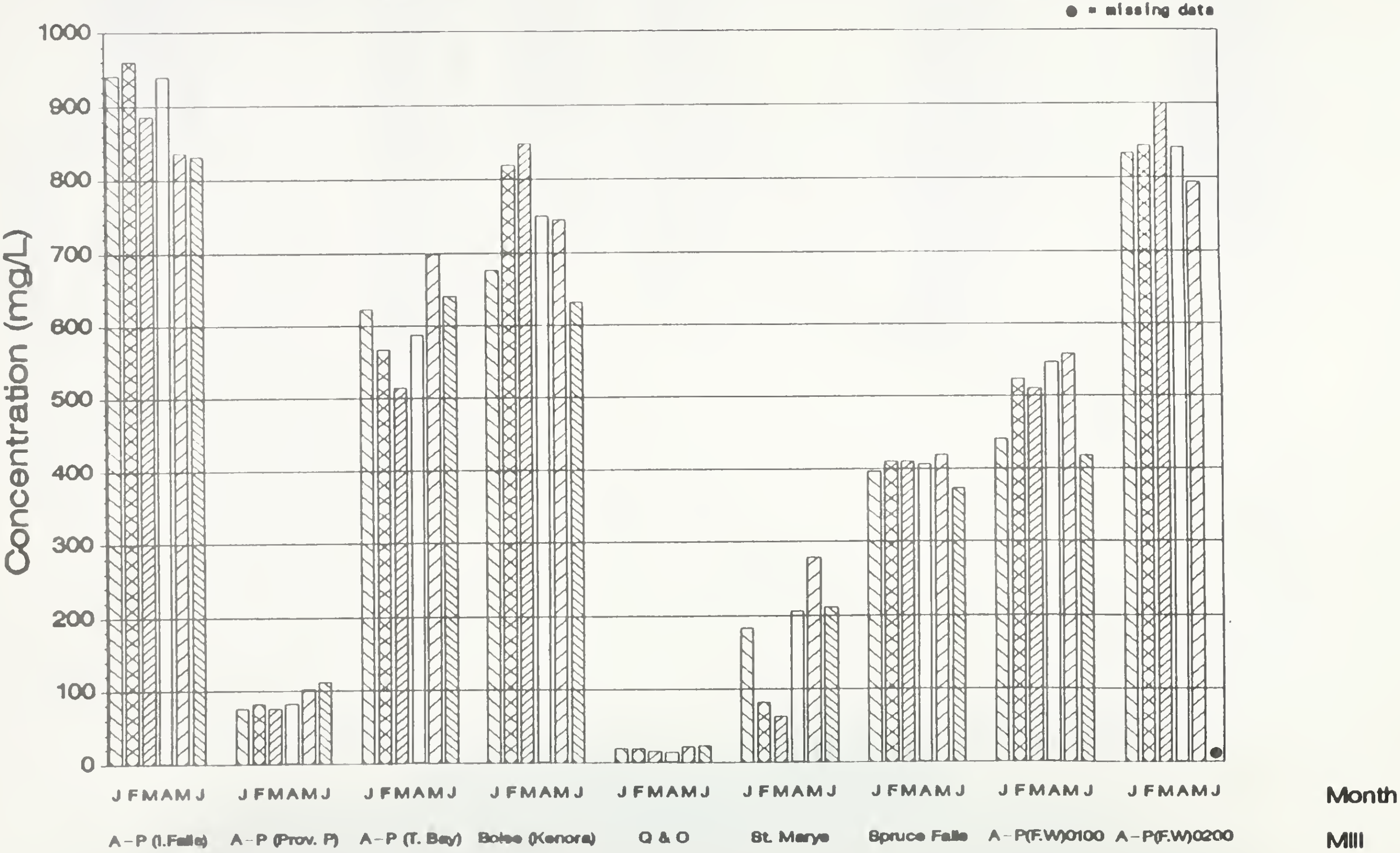


Figure 1.3
Corrugating Mill Process Effluent
Monthly Average Concentration of 5-Day Biological Oxygen Demand

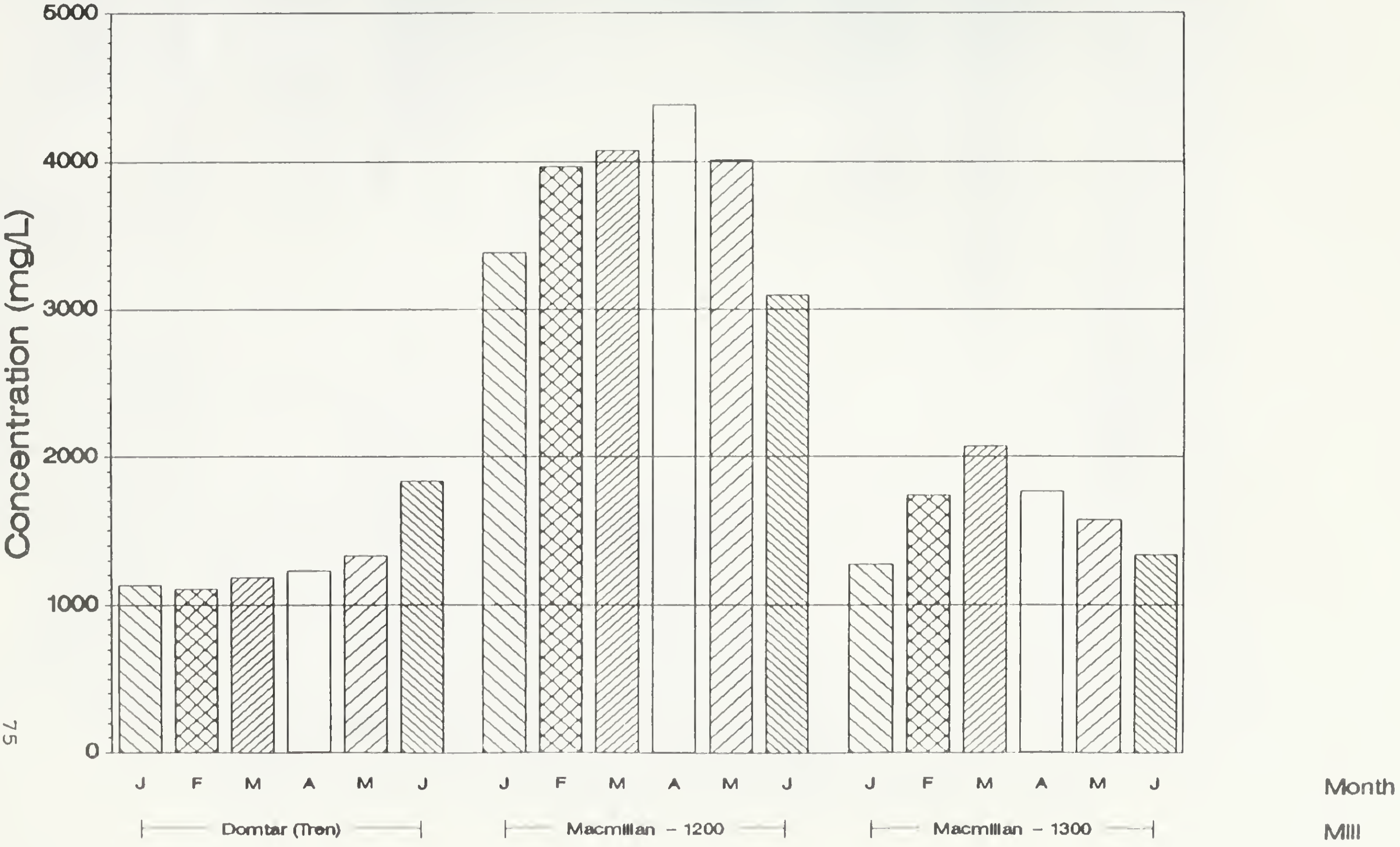


Figure 1.4

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of 5 – Day Biological Oxygen Demand

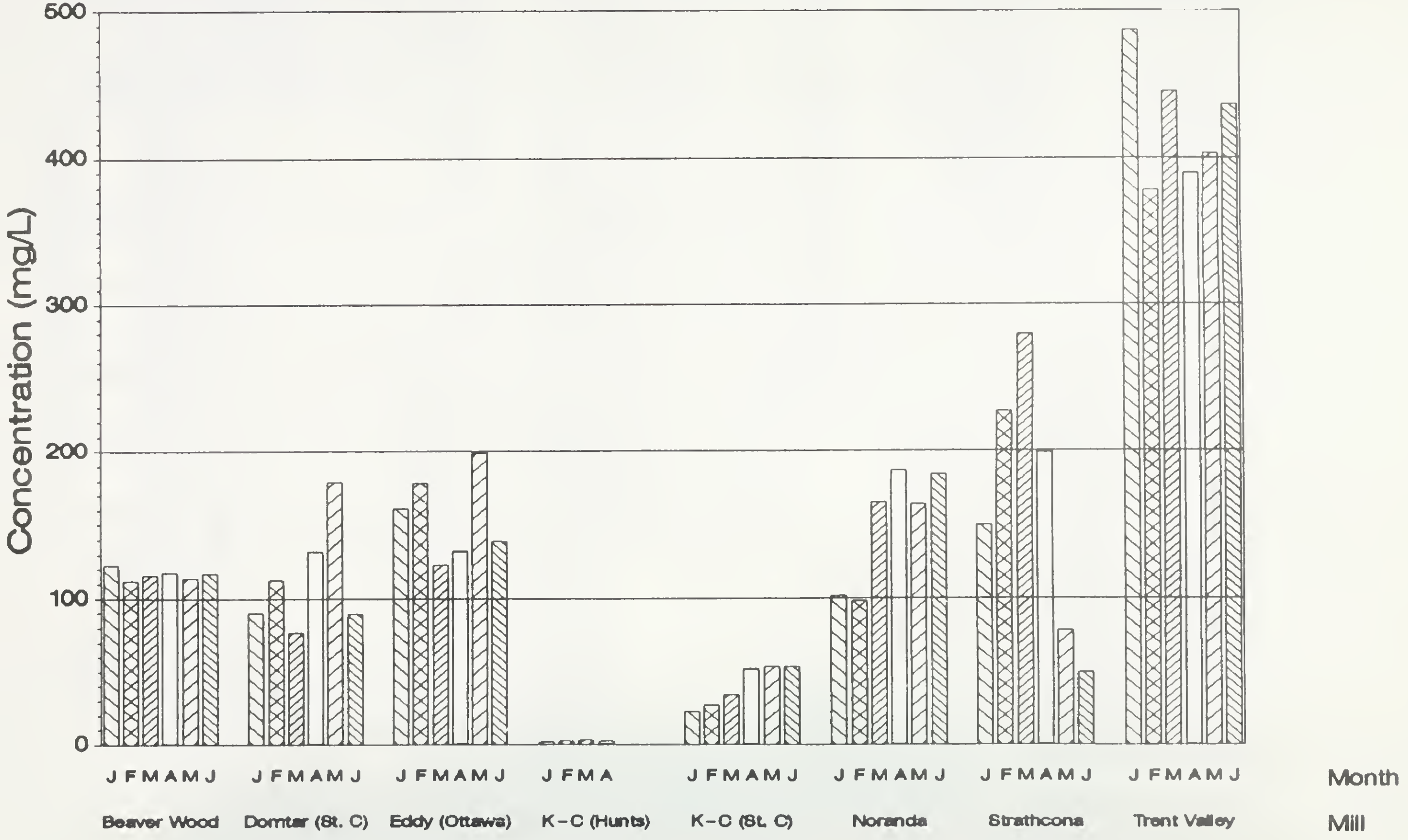


Figure 1.5

Sulphate (Kraft) Mill Process Effluent

Monthly Average Concentration of Total Suspended Solids

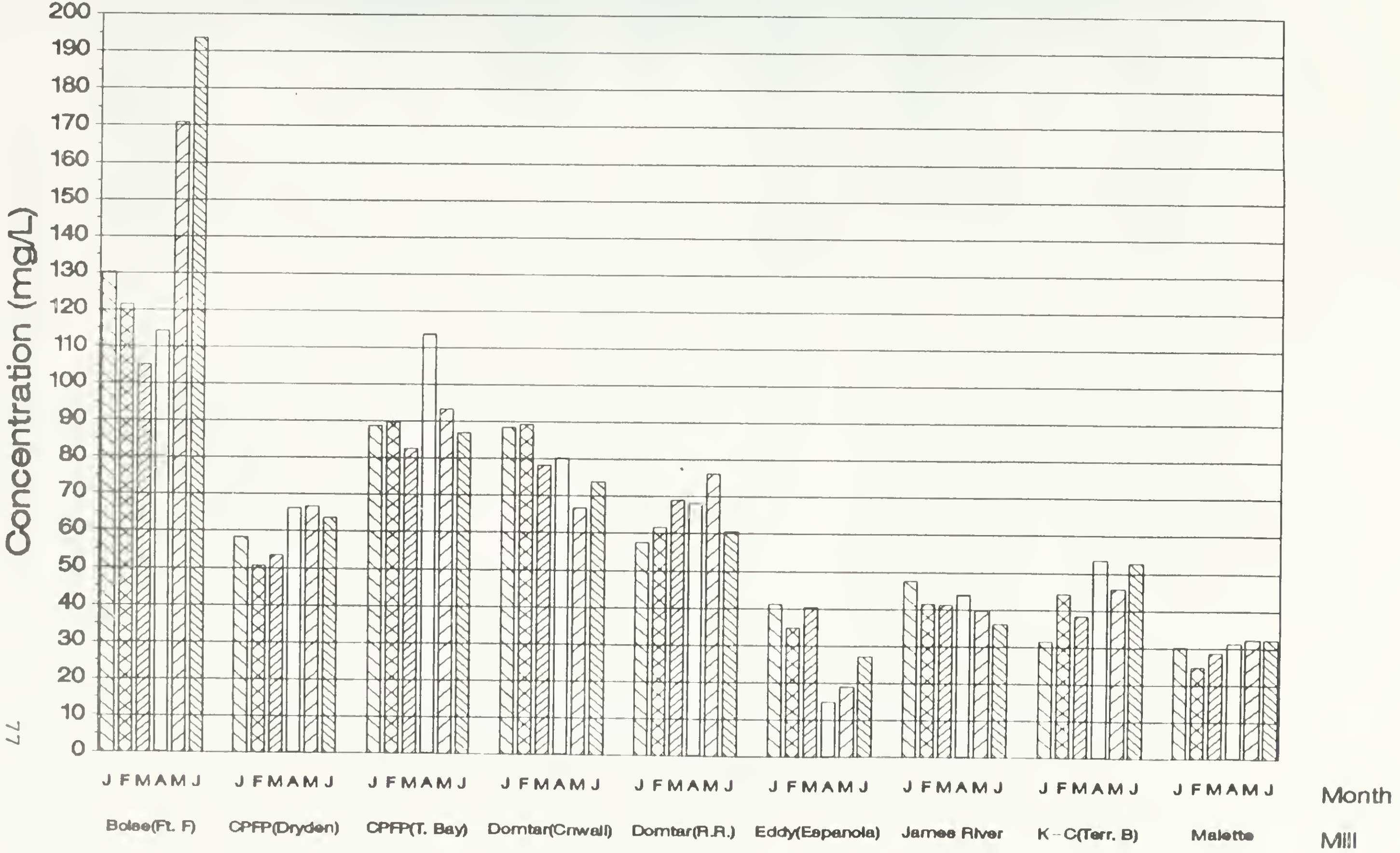


Figure 1.6

Sulphite – Mechanical Mill Process Effluent

Monthly Average Concentration of Total Suspended Solids

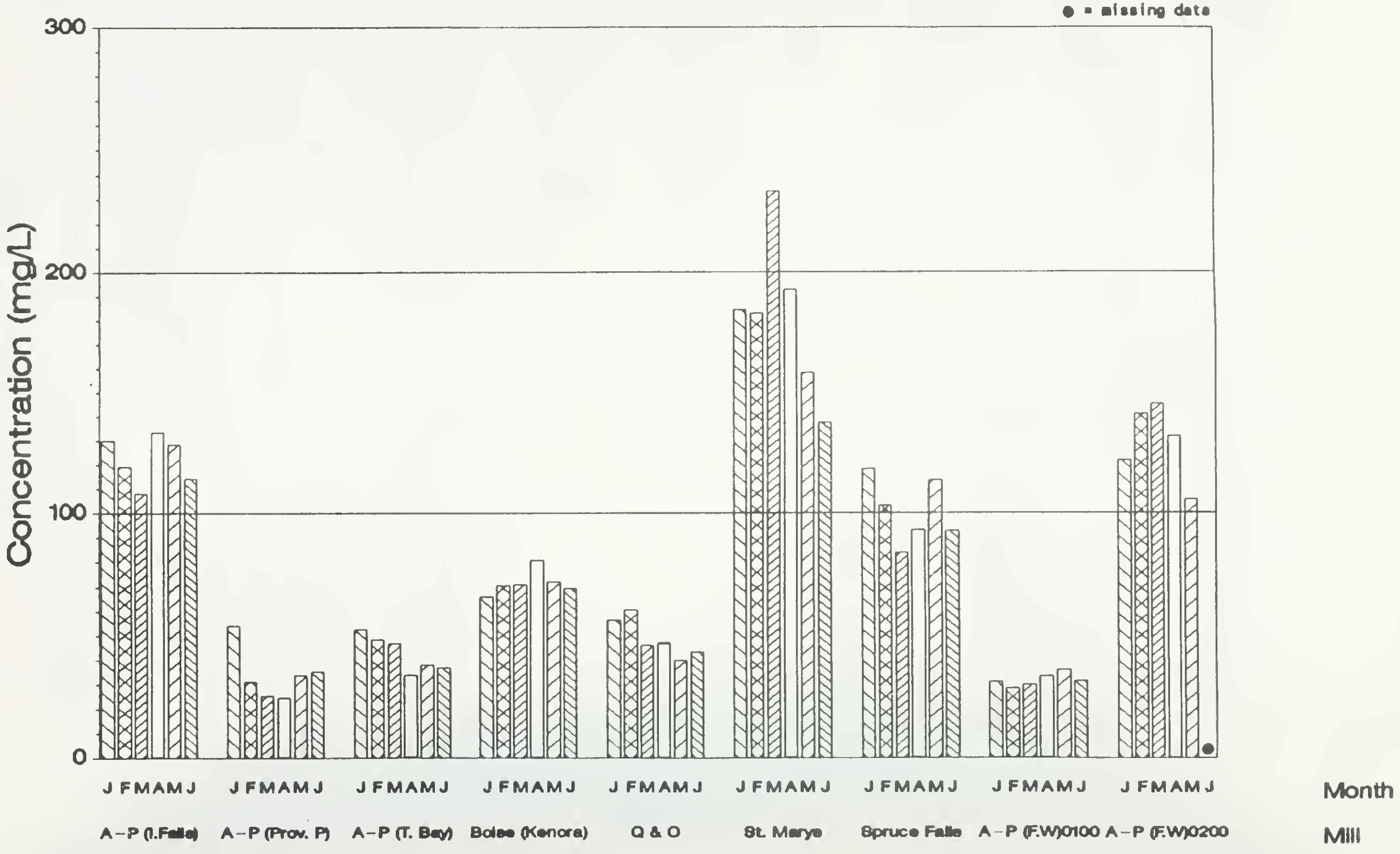


Figure 1.7
Corrugating Mill Process Effluent
Monthly Average Concentration of Total Suspended Solids

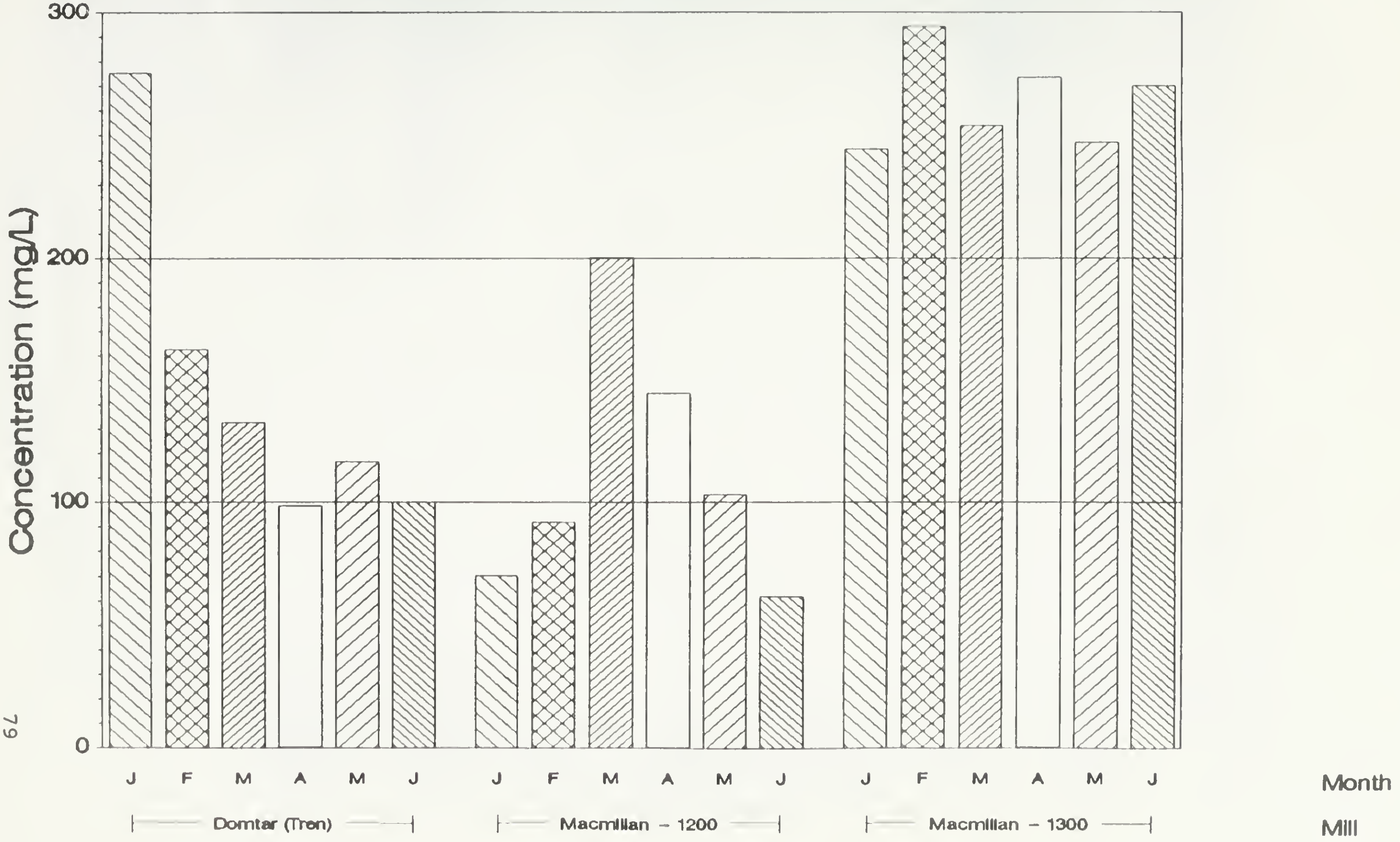


Figure 1.8

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Total Suspended Solids

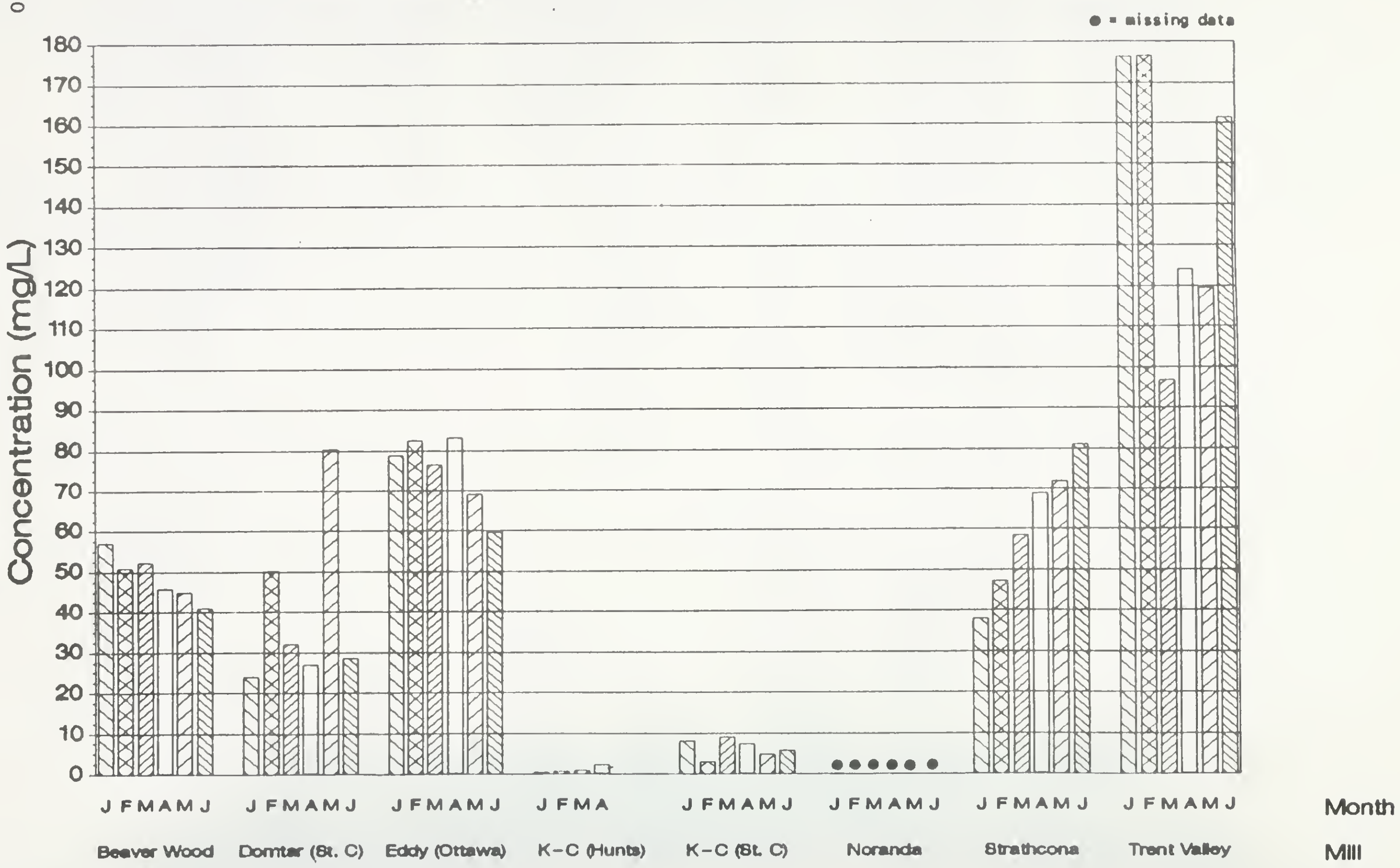


Figure 1.9

Sulphate (Kraft) Mill Process Effluent

Monthly Average Concentration of Adsorbable Organic Halide

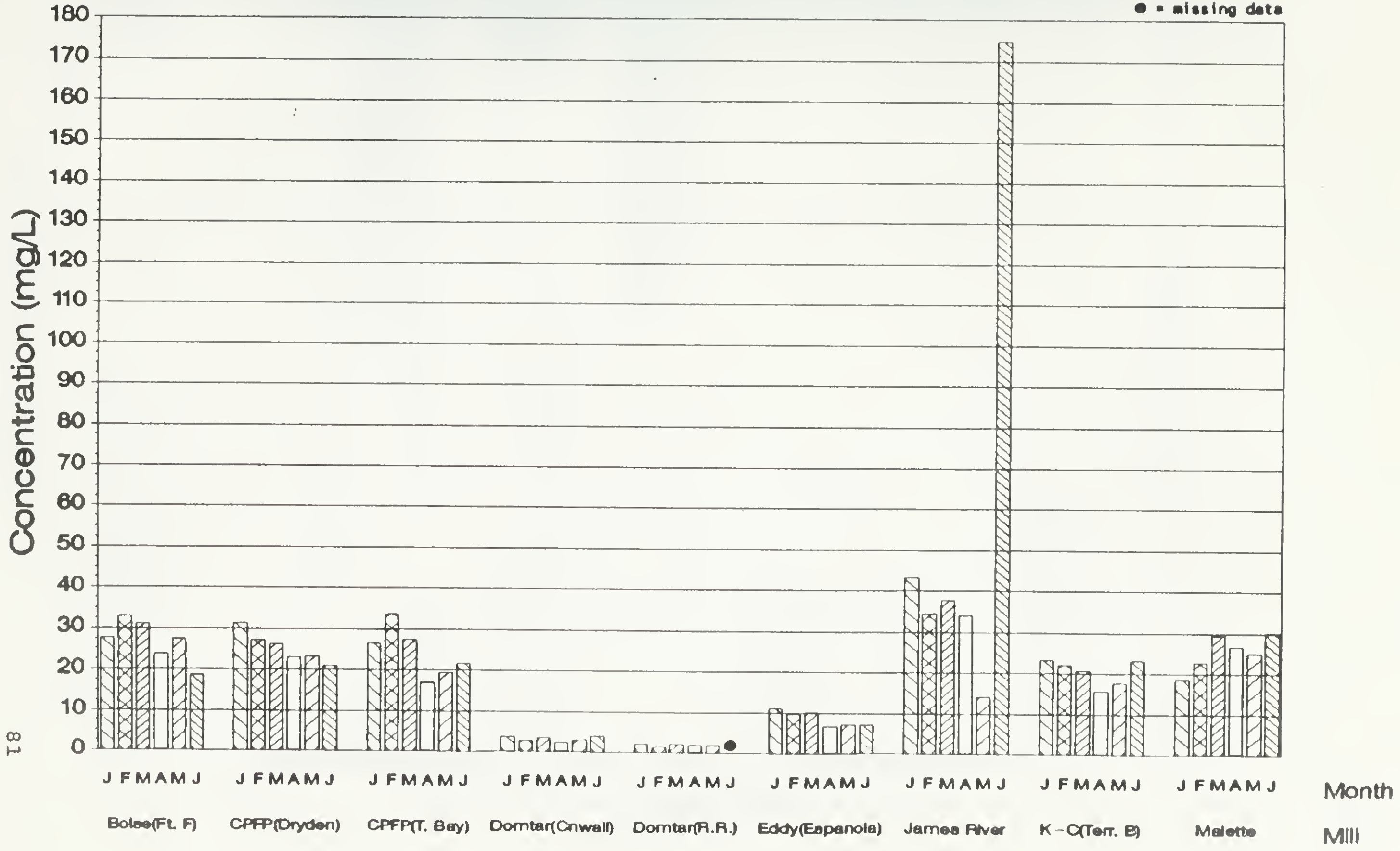


Figure 1.10

Sulphate (Kraft) Mill Process Effluent

Monthly Average Concentration of Dehydroabietic Acid

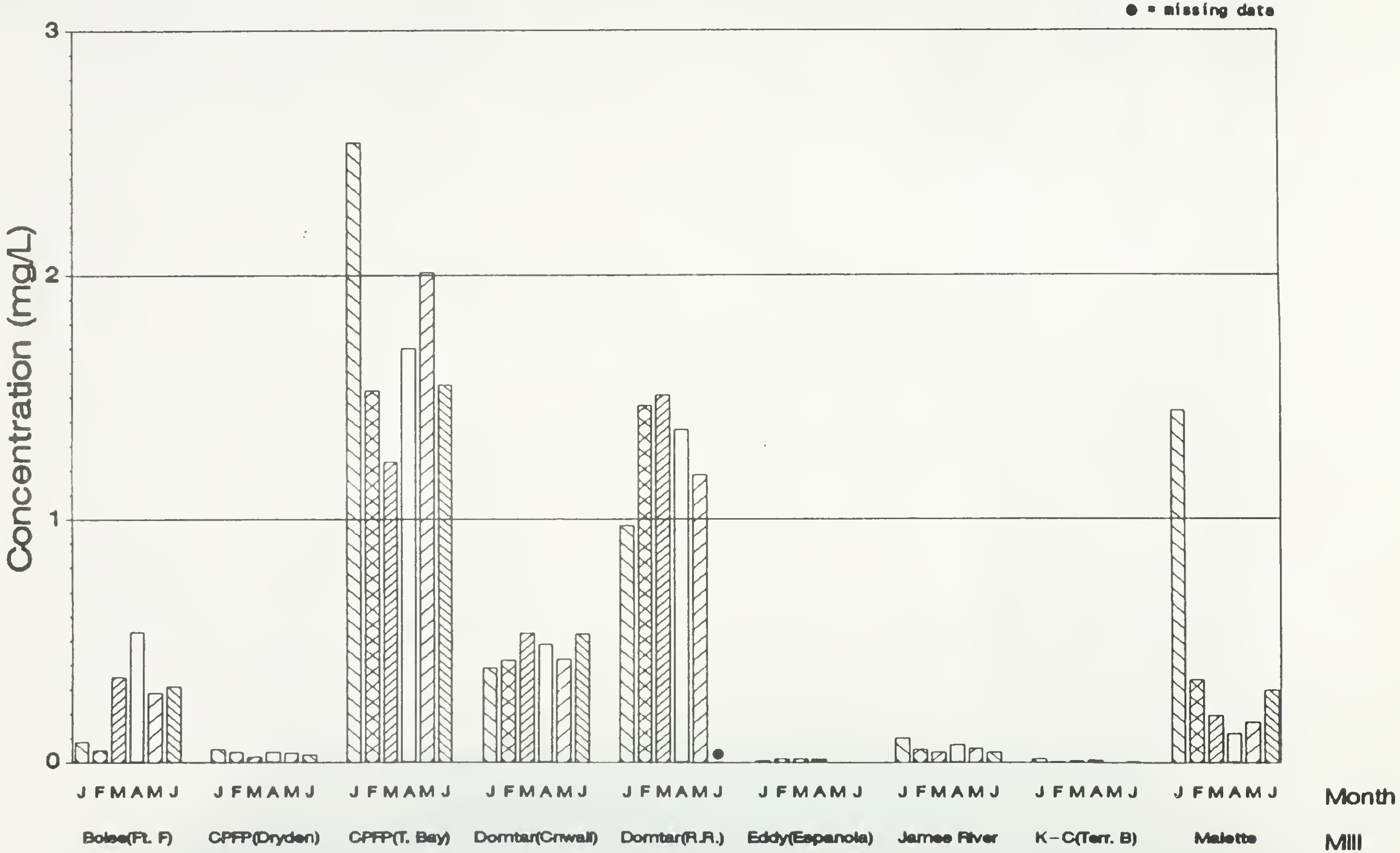


Figure 1.11
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of Dehydroabietic Acid

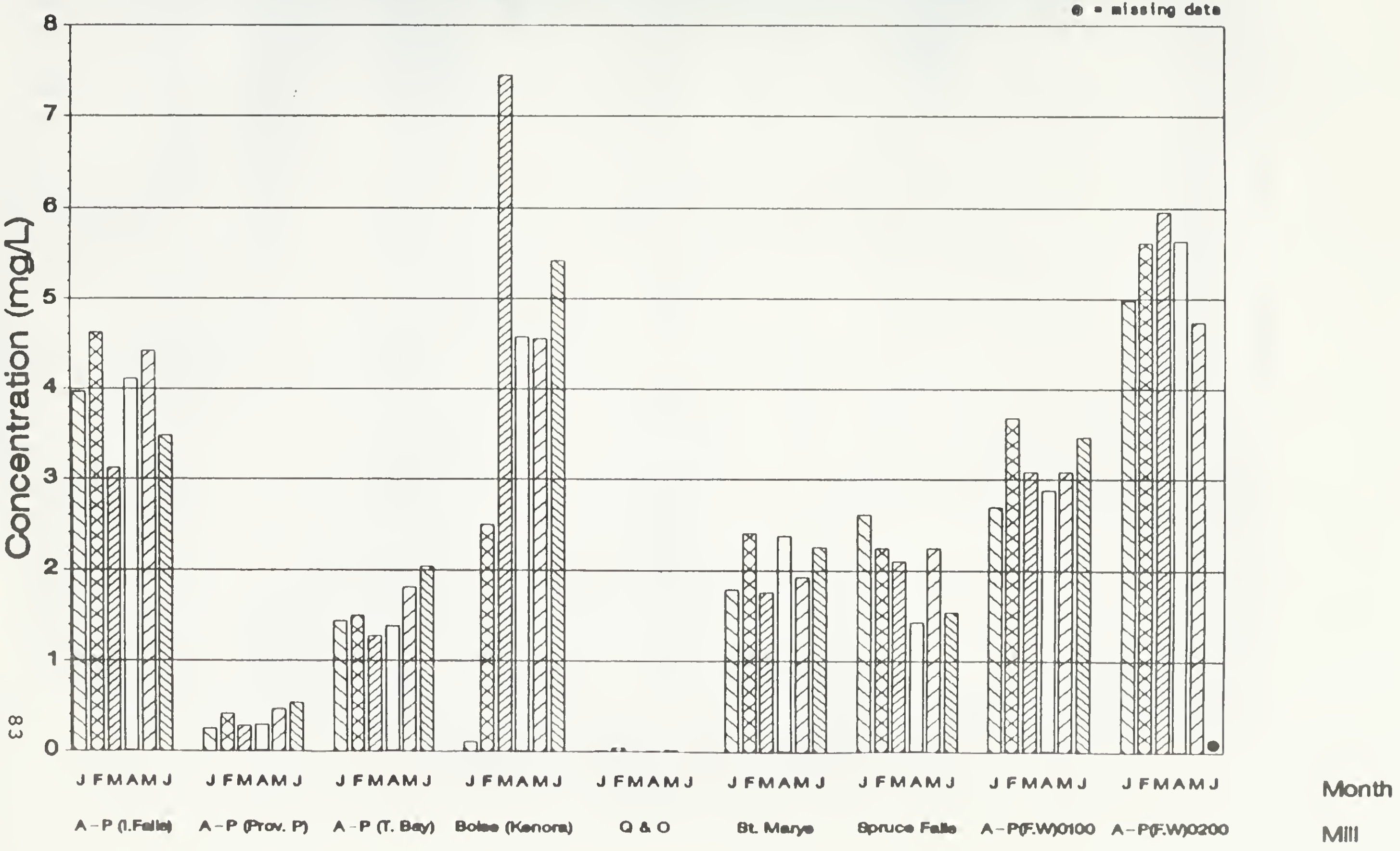


Figure 1.12

Sulphate (Kraft) Mill Process Effluent

Monthly Average Concentration of Dichlorodehydroabietic Acid

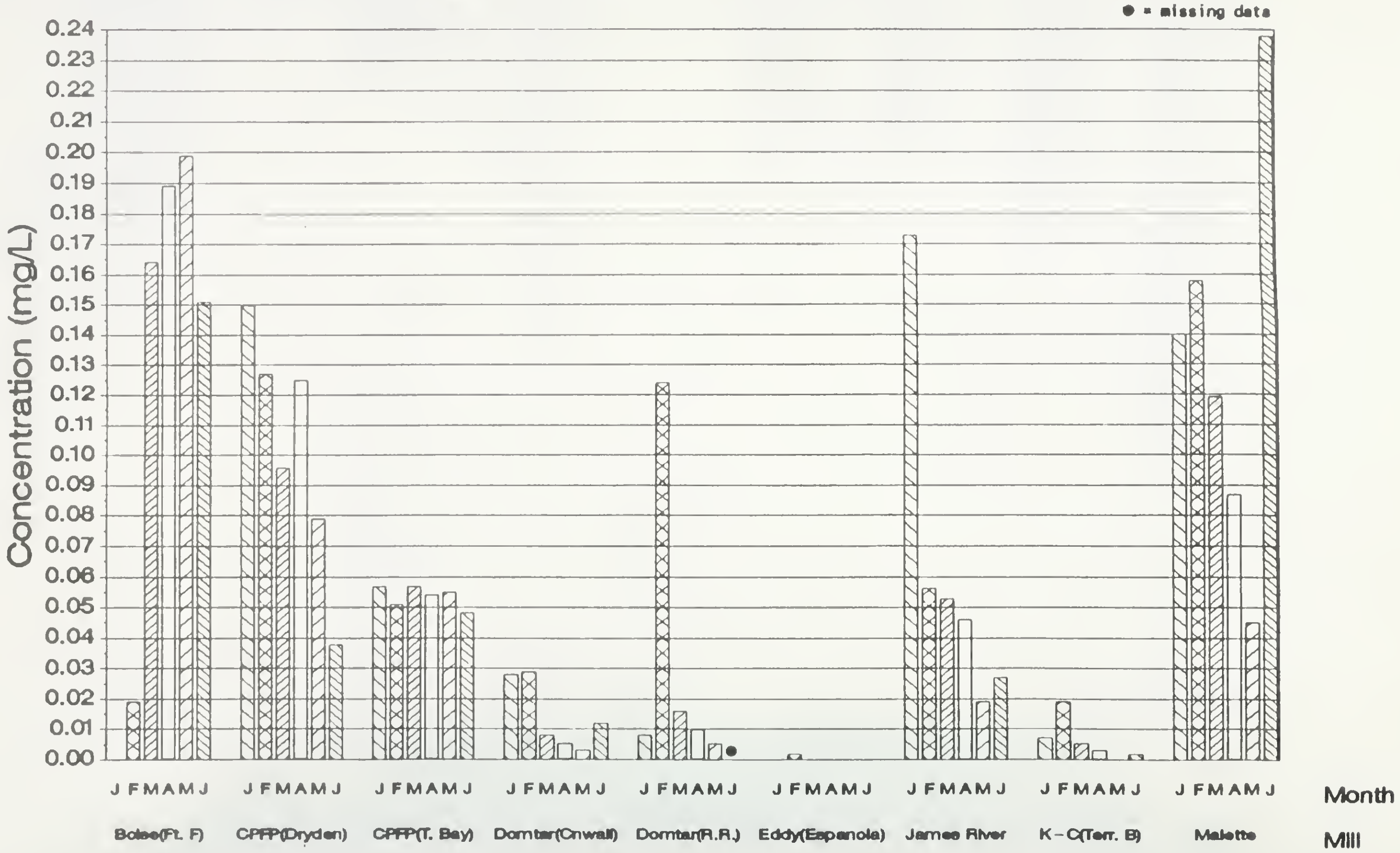


Figure 1.13

Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of Aluminum

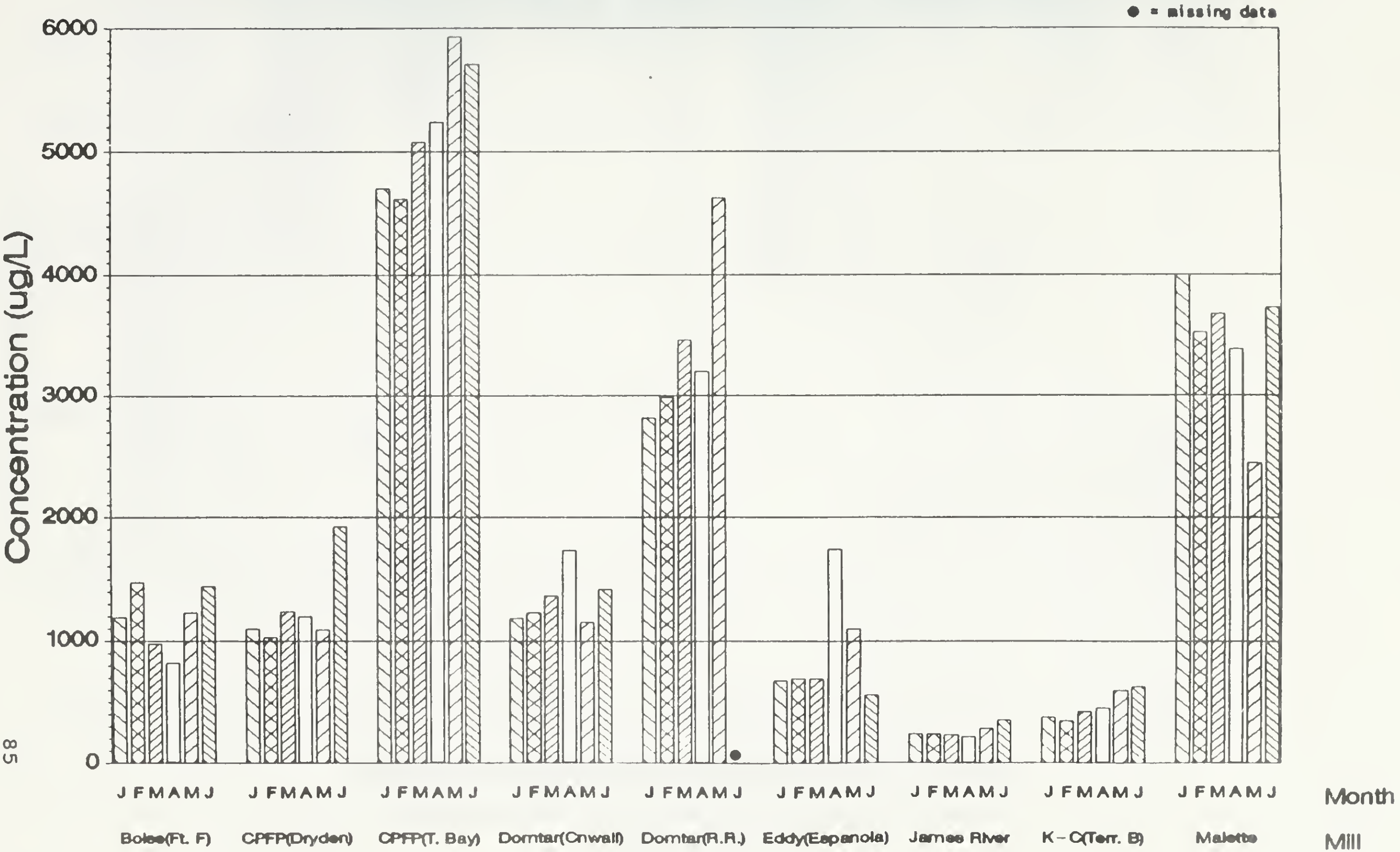


Figure 1.14

Sulphite – Mechanical Mill Process Effluent

Monthly Average Concentration of Aluminum

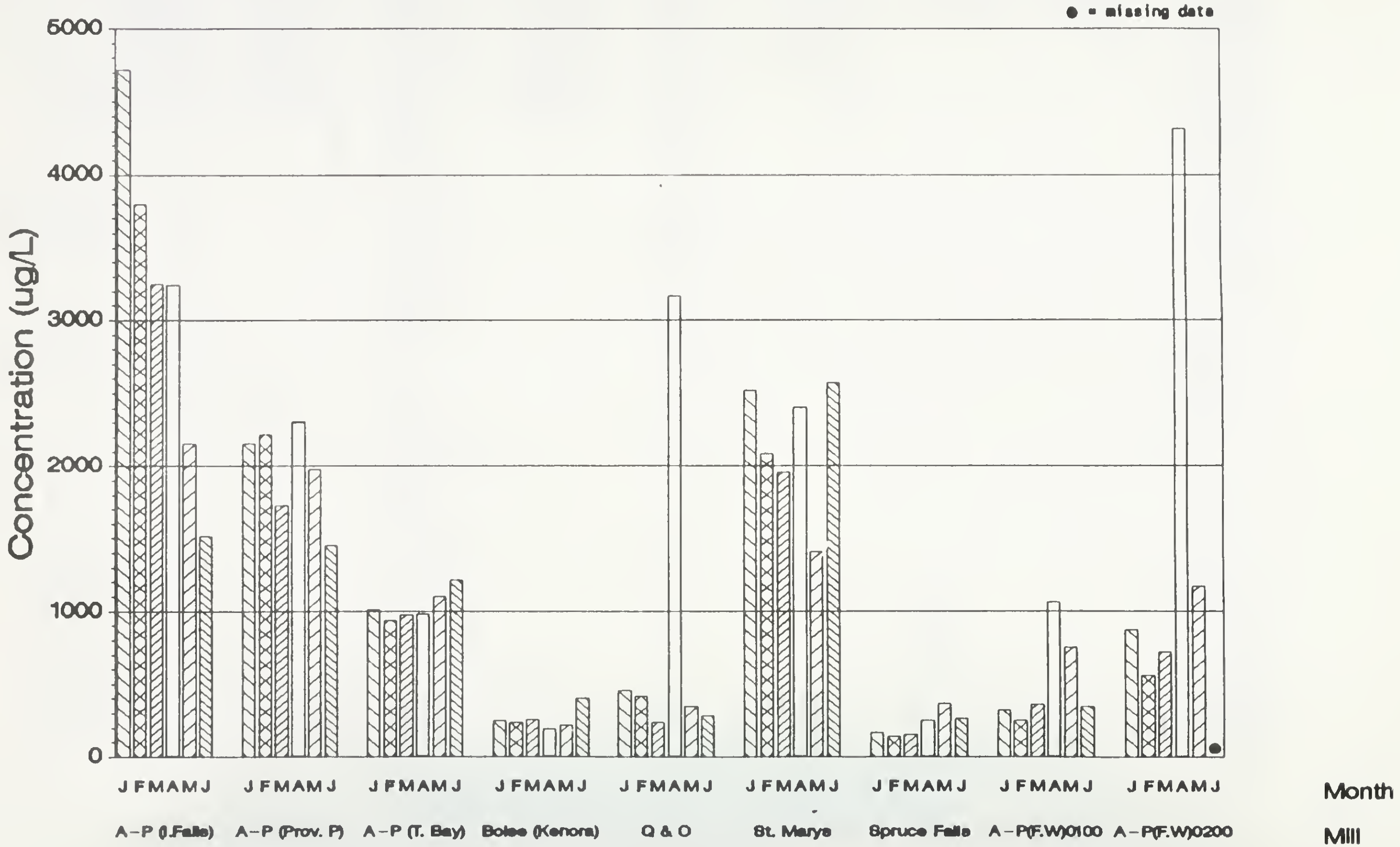


Figure 1.15
Corrugating Mill Process Effluent
Monthly Average Concentration of Aluminum

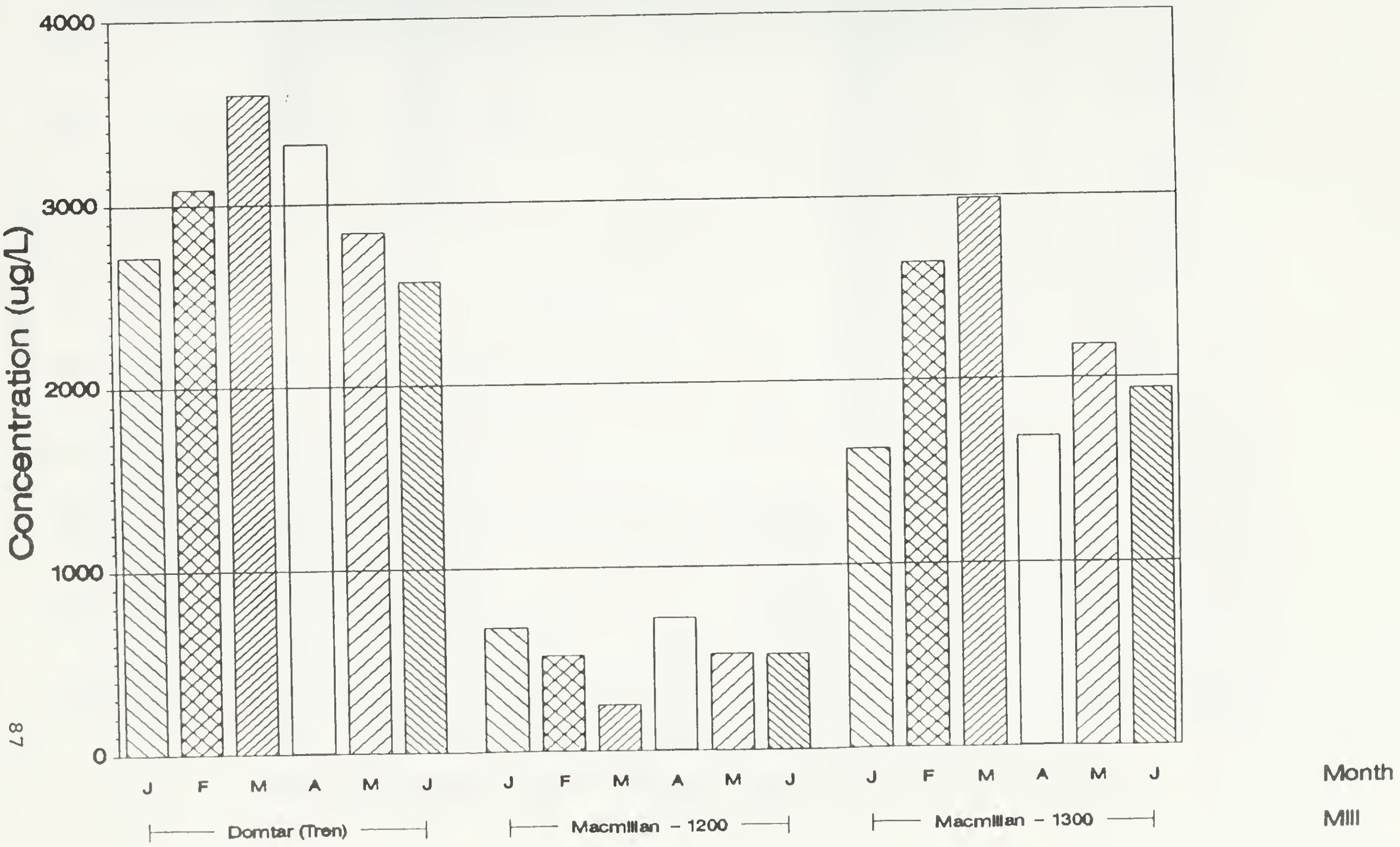


Figure 1.16
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Aluminum

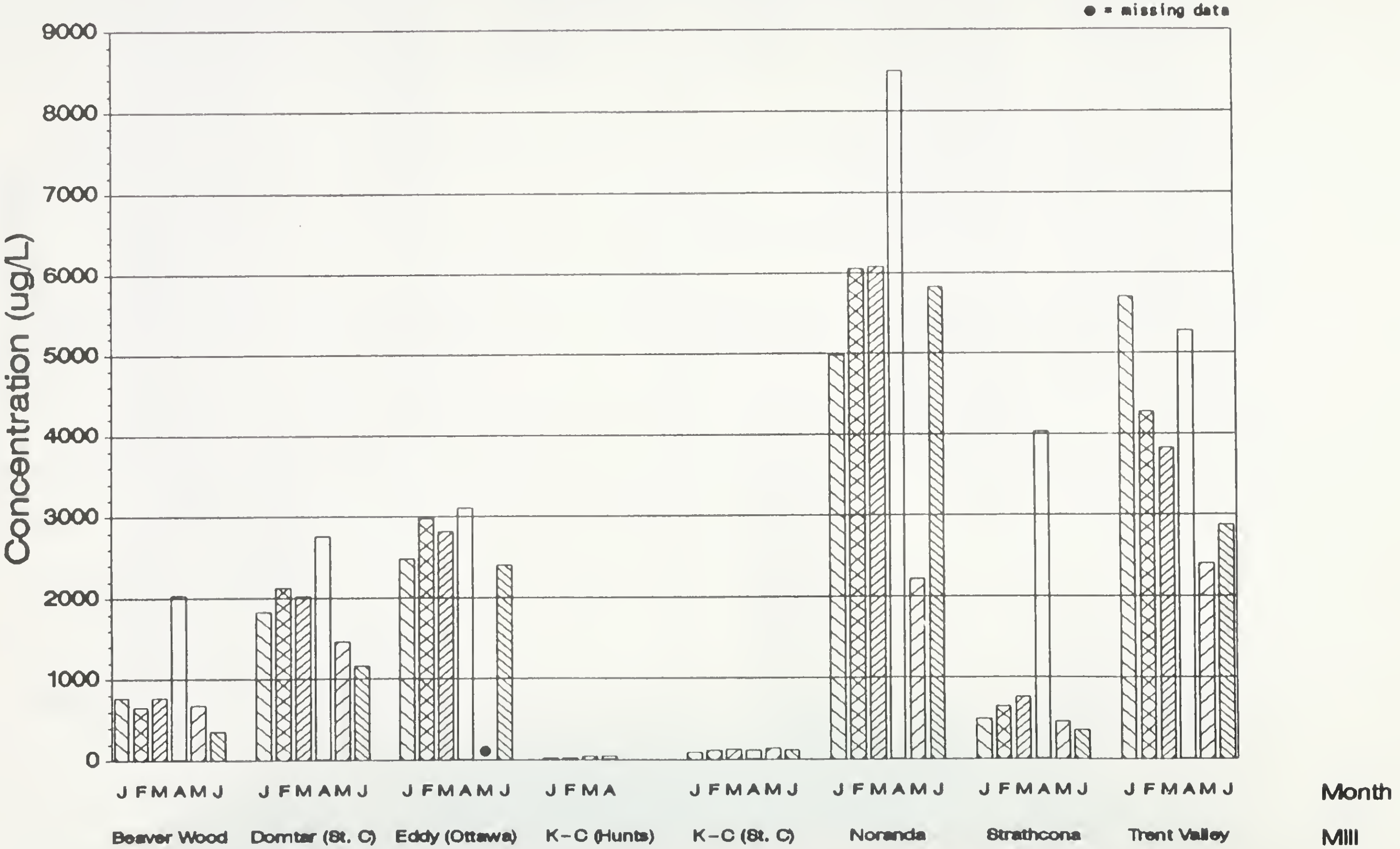


Figure 1.17
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of Zinc

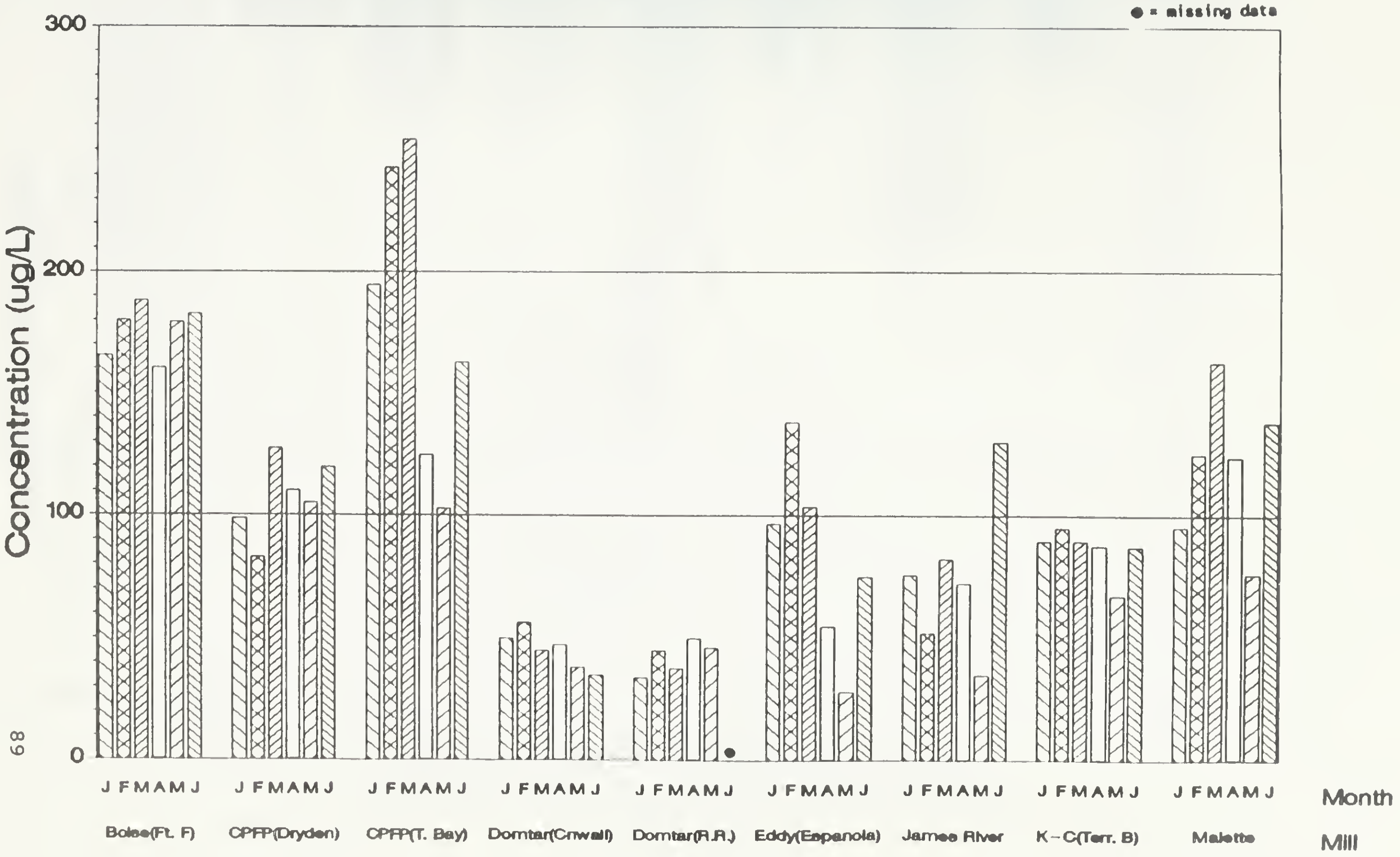


Figure 1.18
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of Zinc

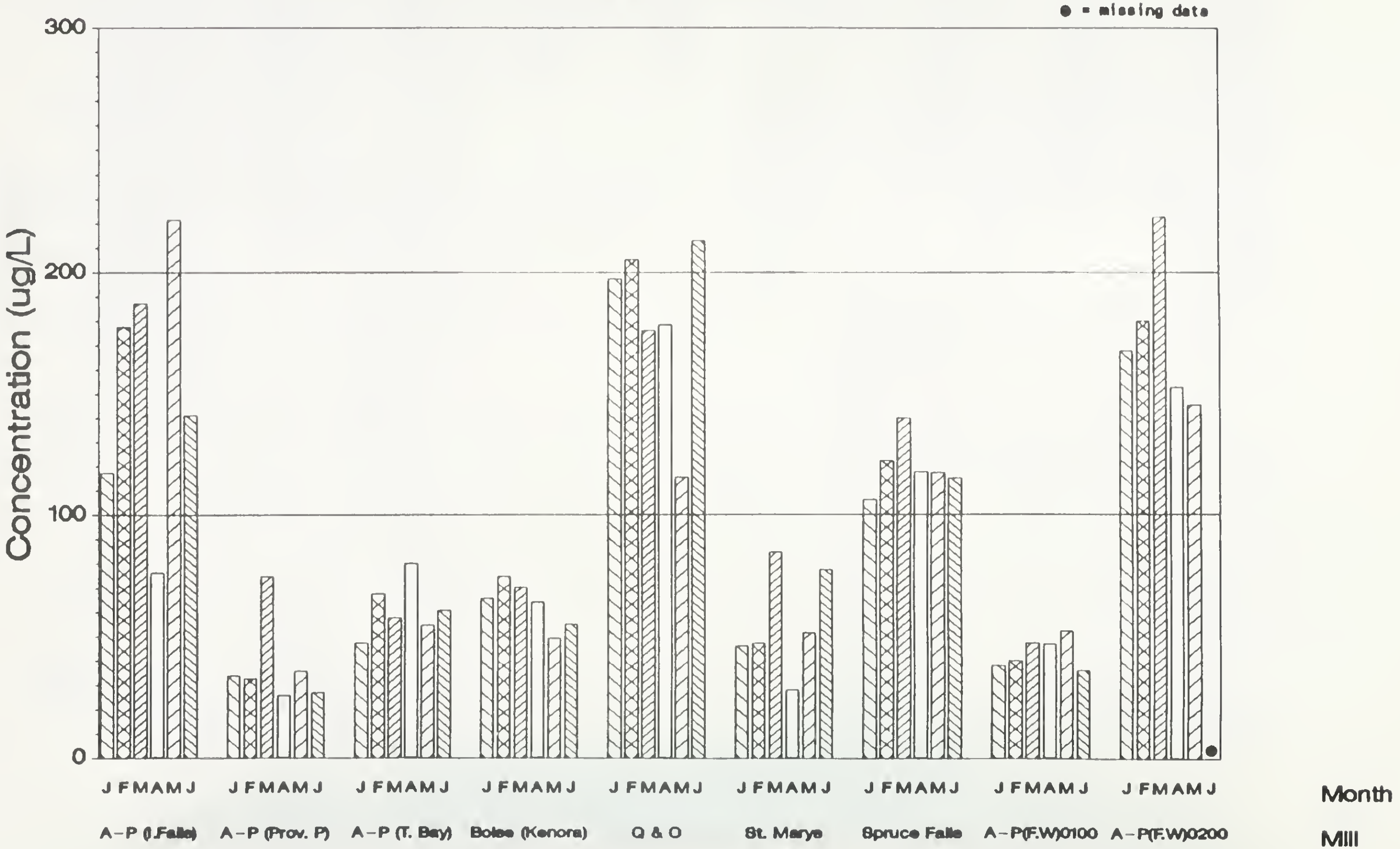


Figure 1.19
Corrugating Mill Process Effluent
Monthly Average Concentration of Zinc

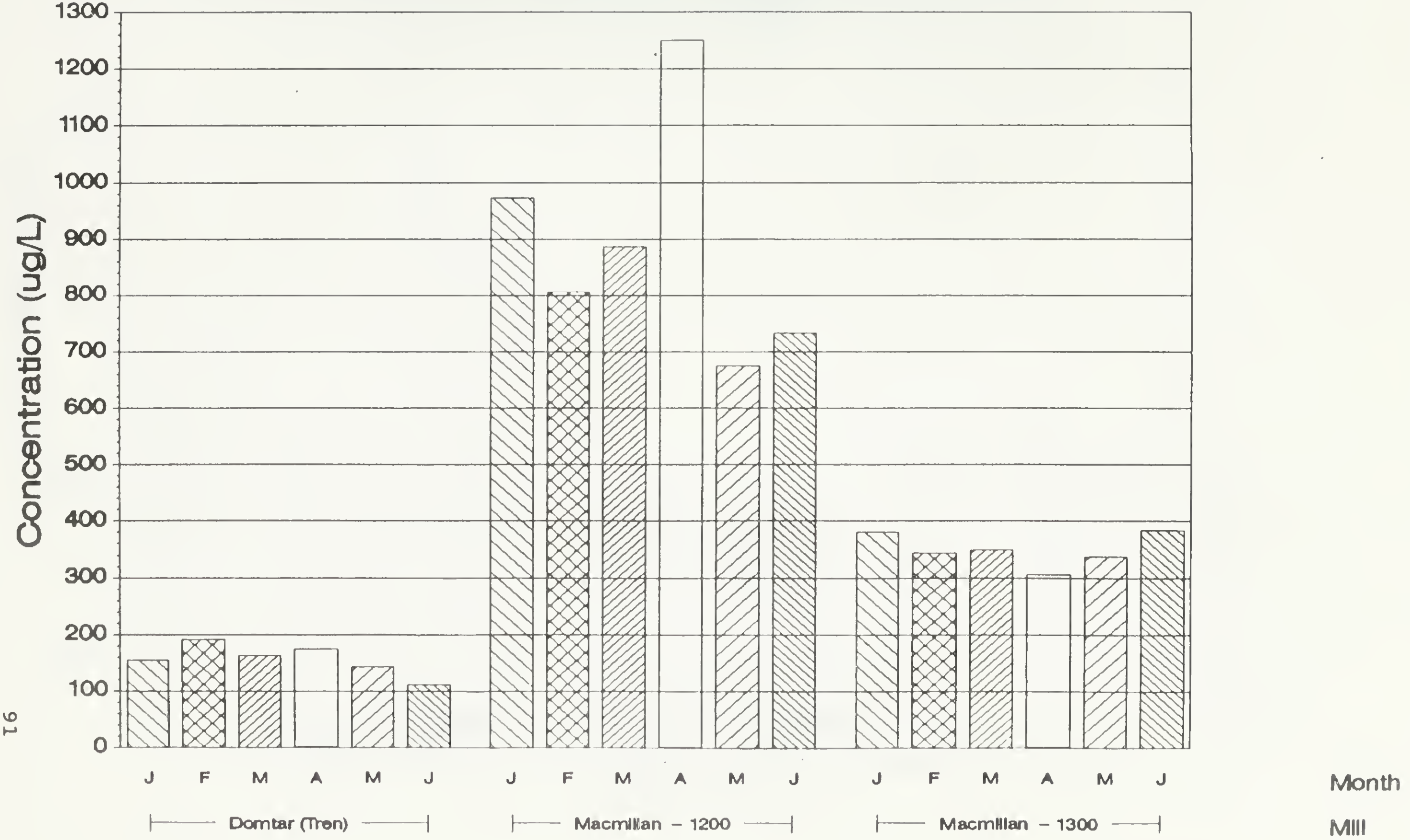


Figure 1.20

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Zinc

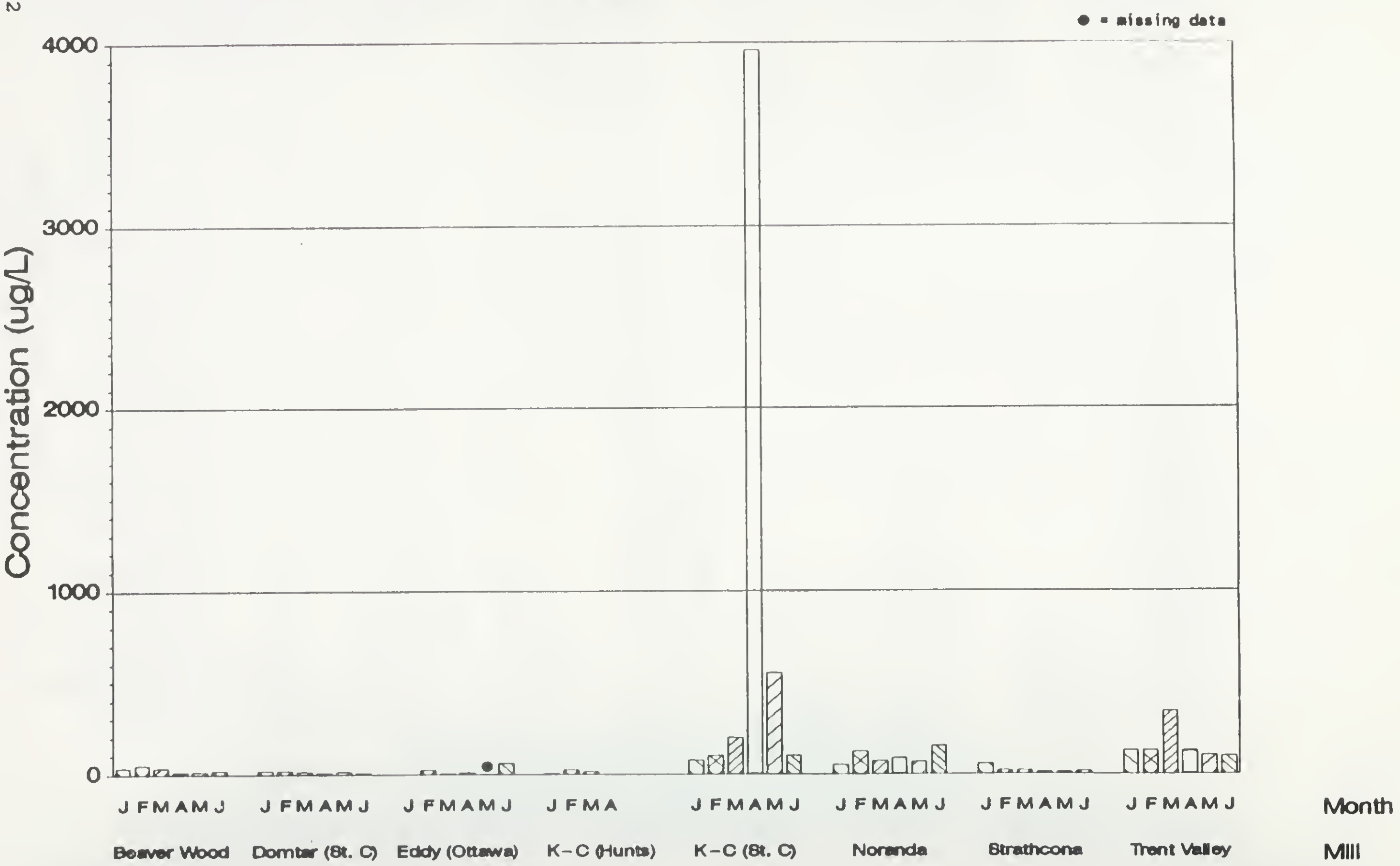


Figure 1.21
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of COD

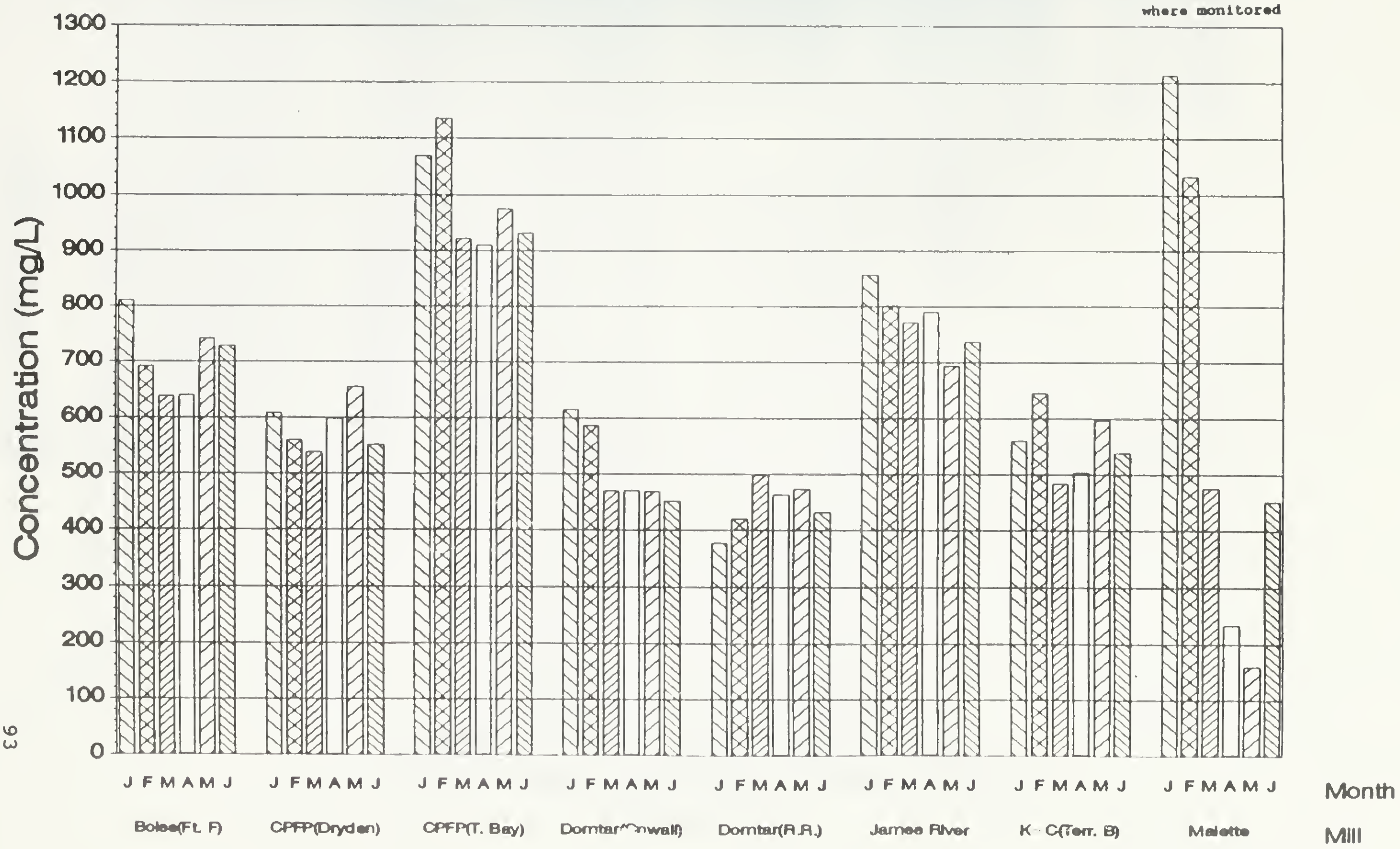


Figure 1.22
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of COD

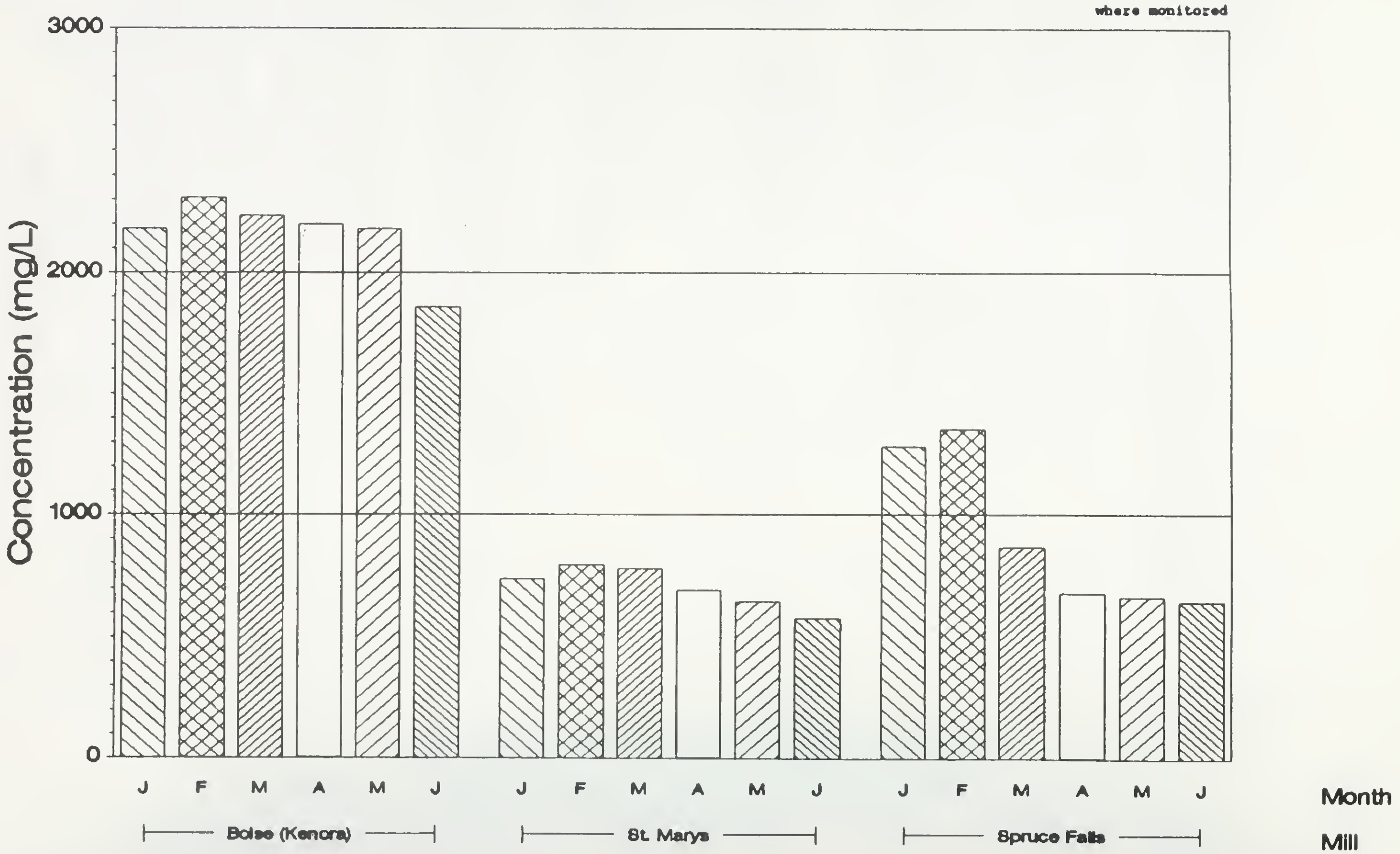


Figure 1.23
Corrugating Mill Process Effluent
Monthly Average Concentration of COD

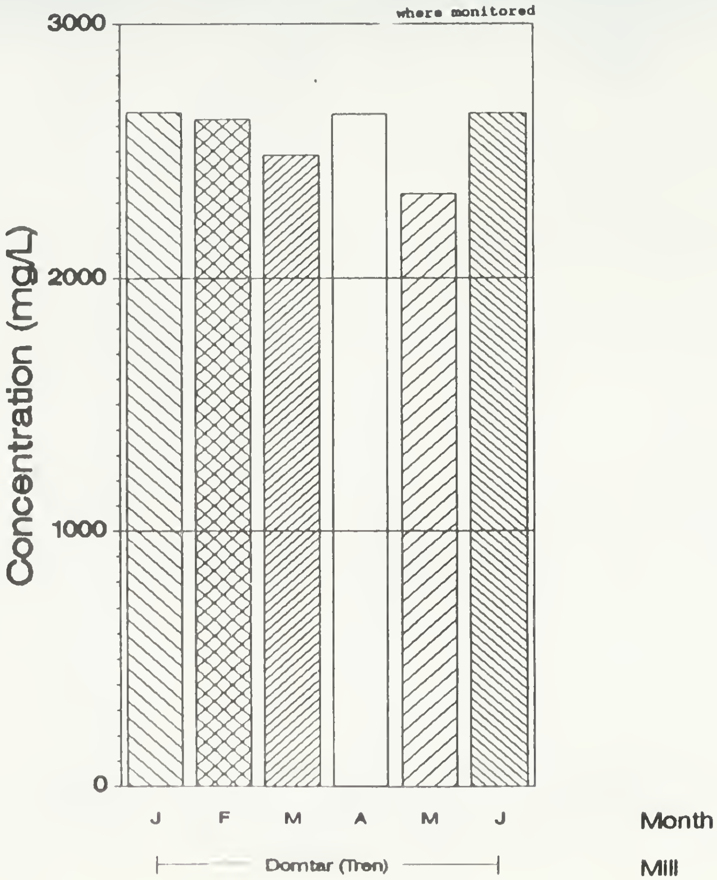


Figure 1.24

Deinking – Board – Fine Papers – Tissue Mill Process Effluent

Monthly Average Concentration of COD

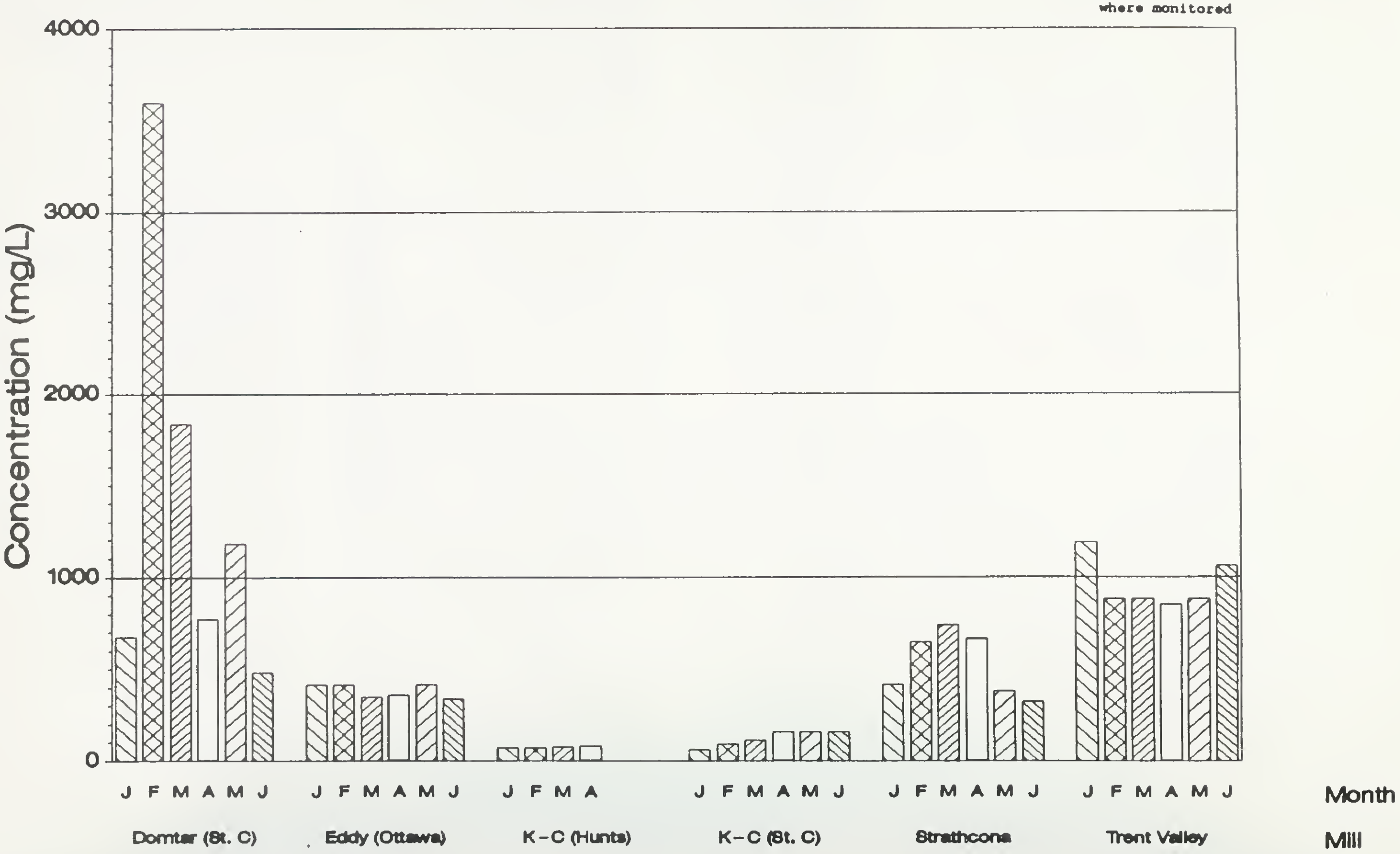


Figure 1.25
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of DOC

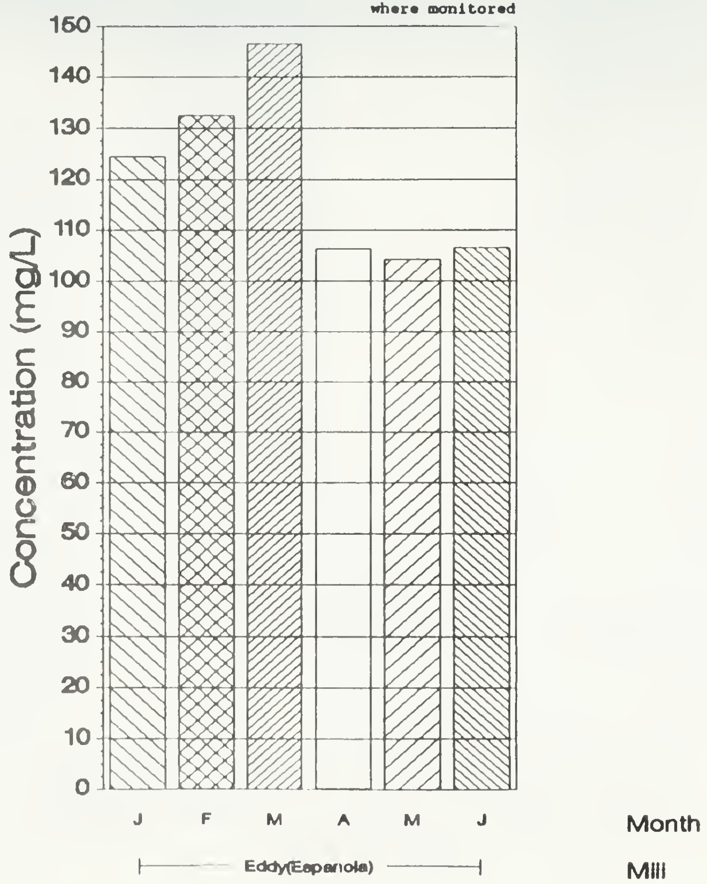


Figure 1.26
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of DOC

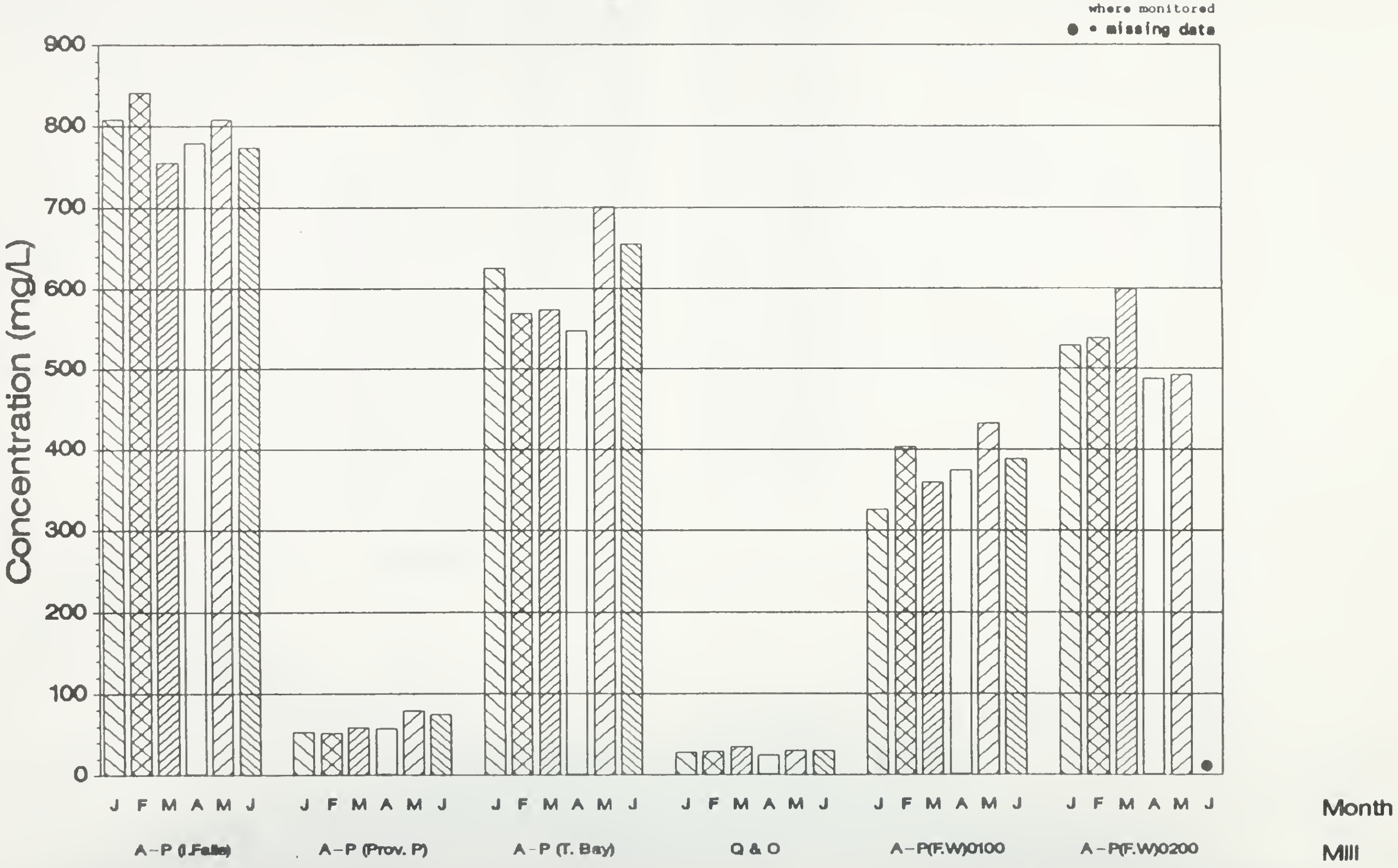


Figure 1.27
Corrugating Mill Process Effluent
Monthly Average Concentration of DOC

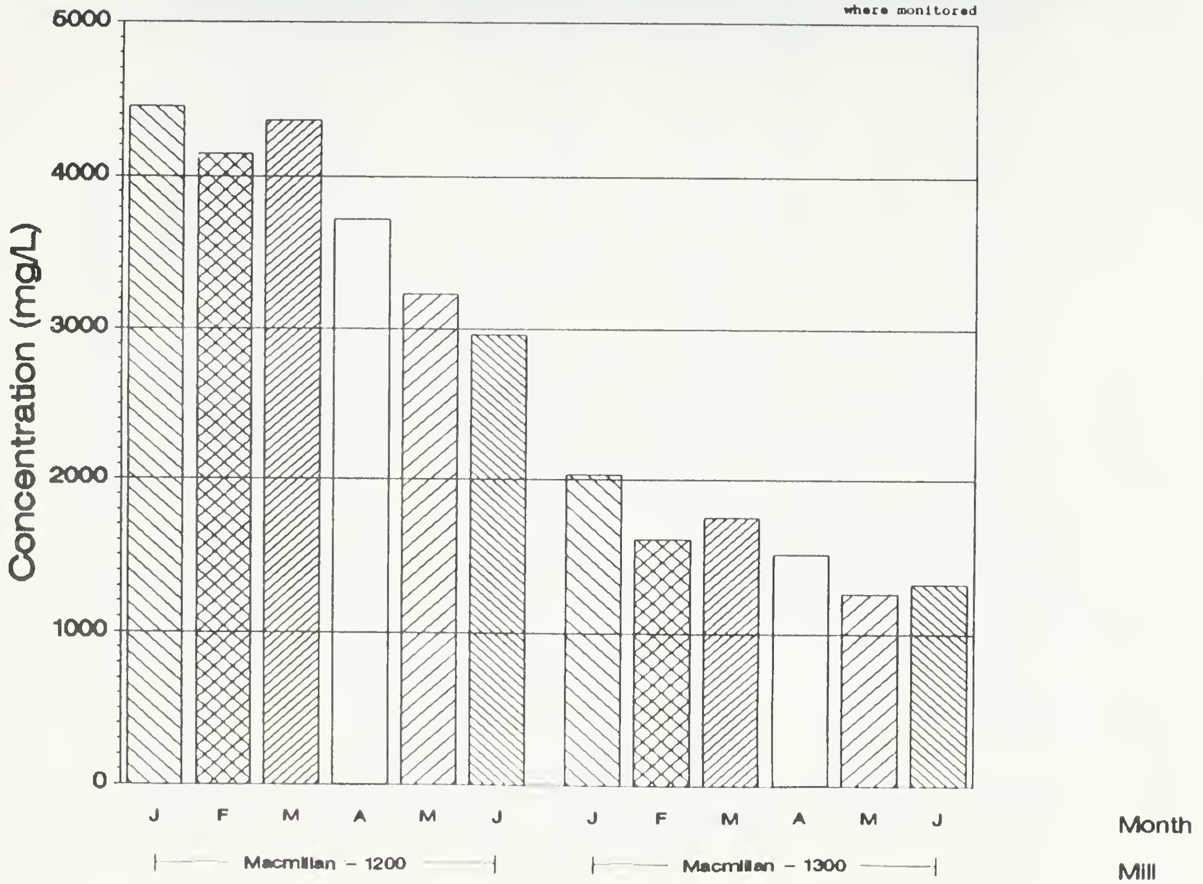


Figure 1.28

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of DOC

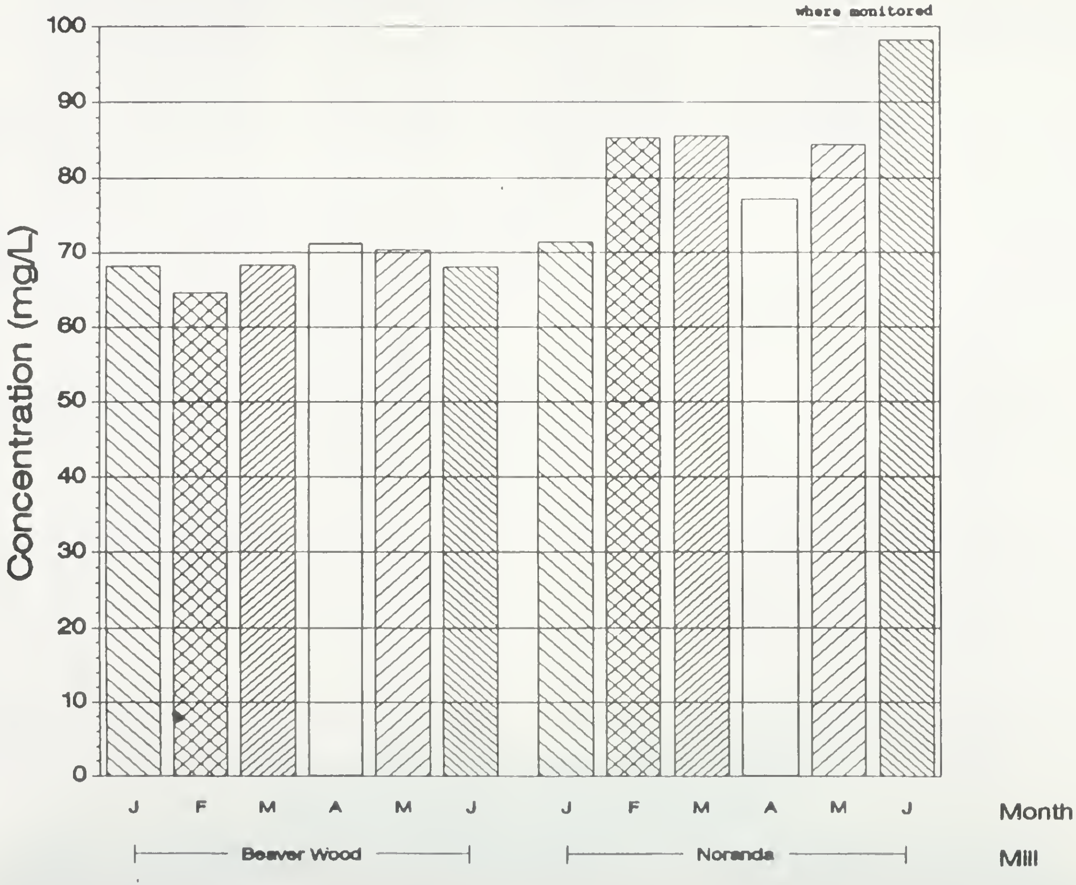


Figure 1.29
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of Ammonia plus Ammonium

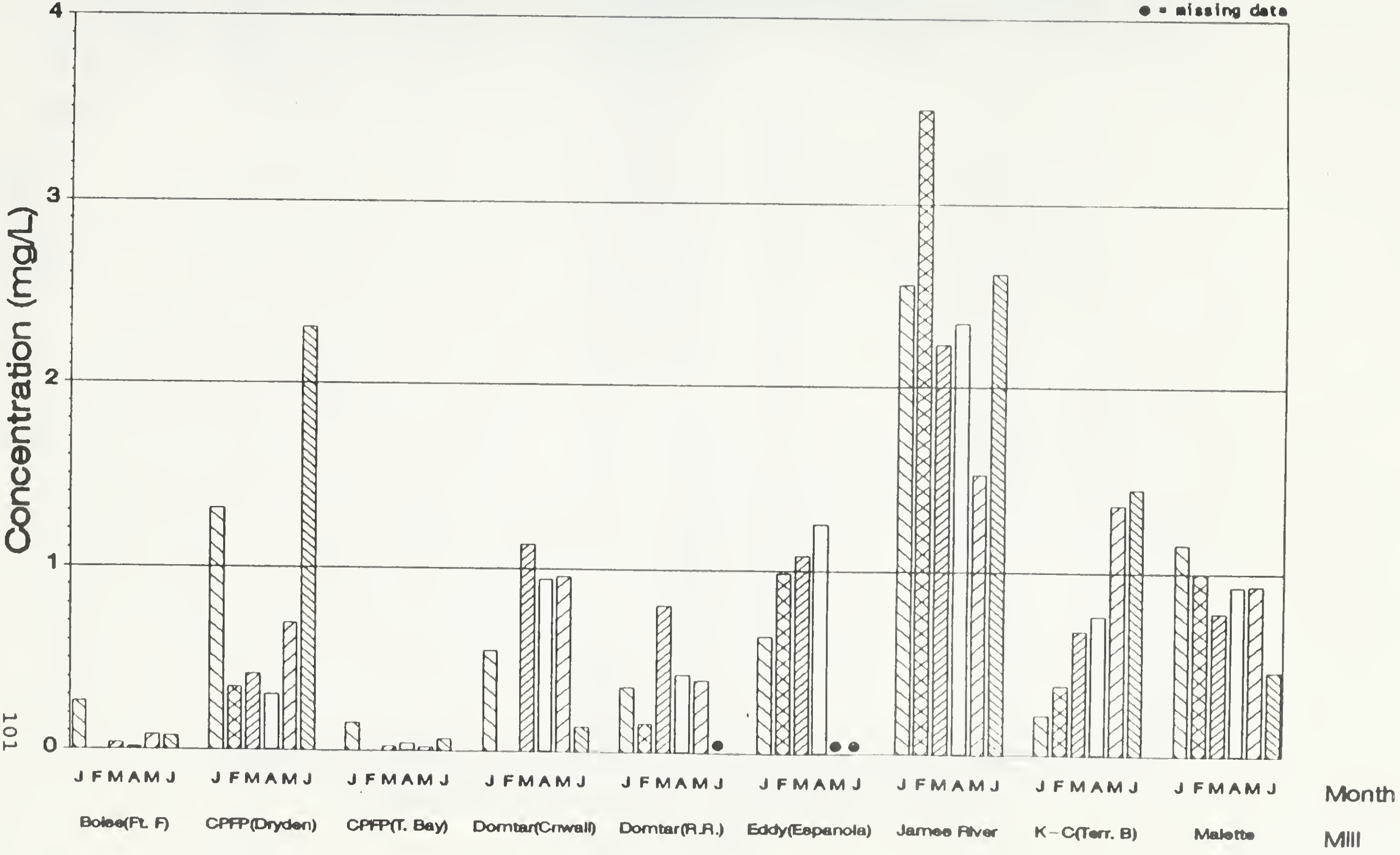


Figure 1.30
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of Ammonia plus Ammonium

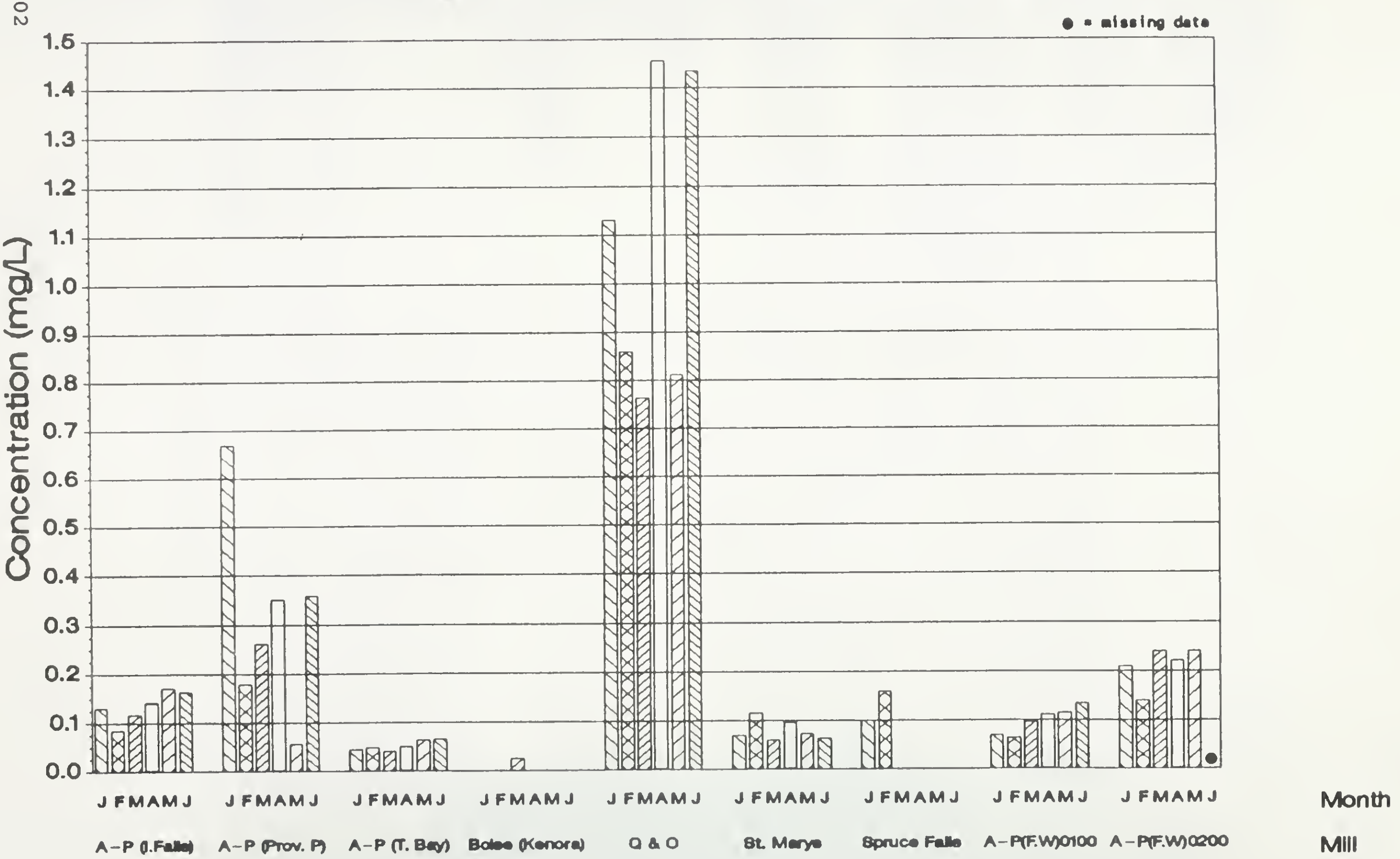


Figure 1.31
Corrugating Mill Process Effluent
Monthly Average Concentration of Ammonia plus Ammonium

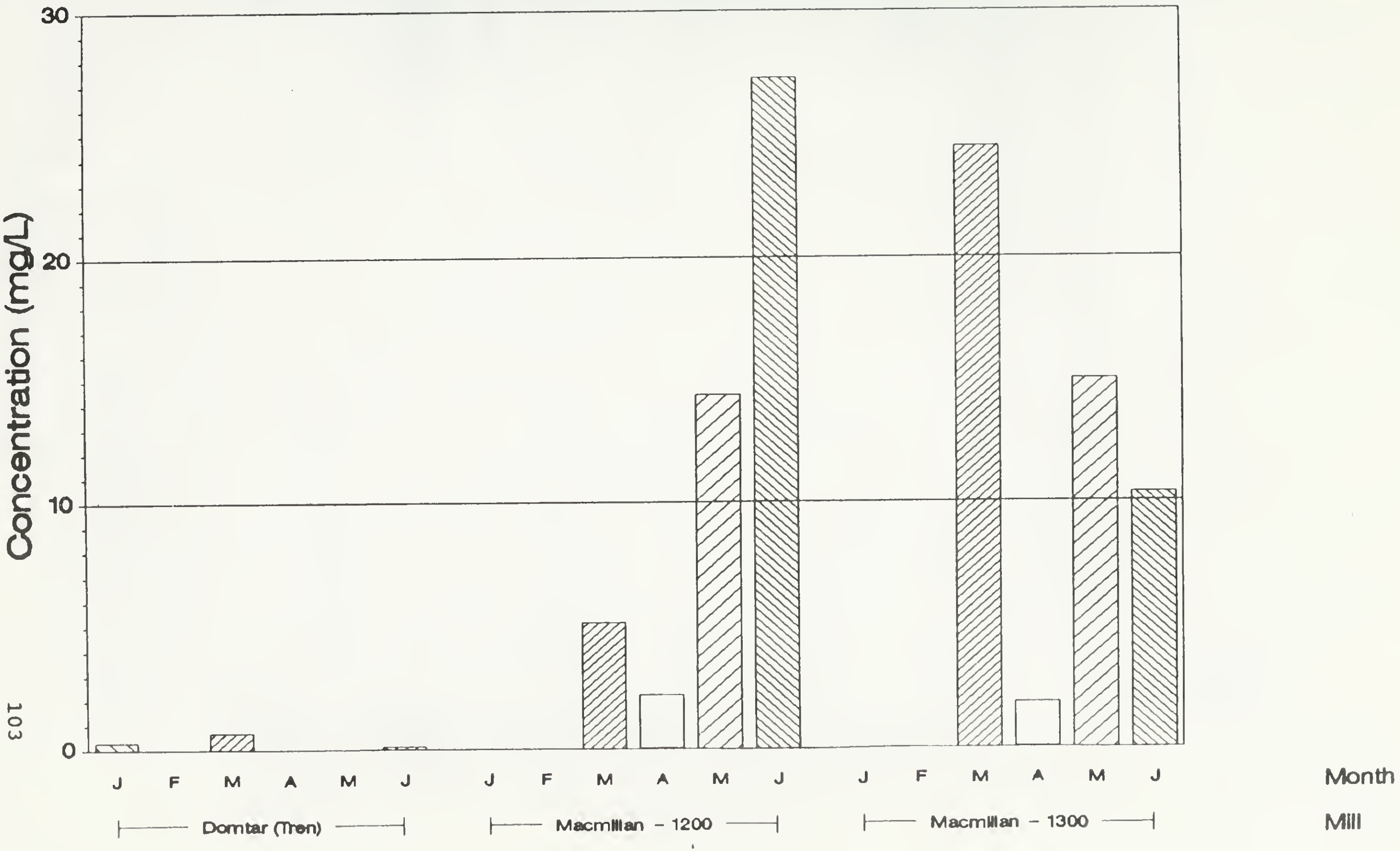


Figure 1.32

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Ammonia plus Ammonium

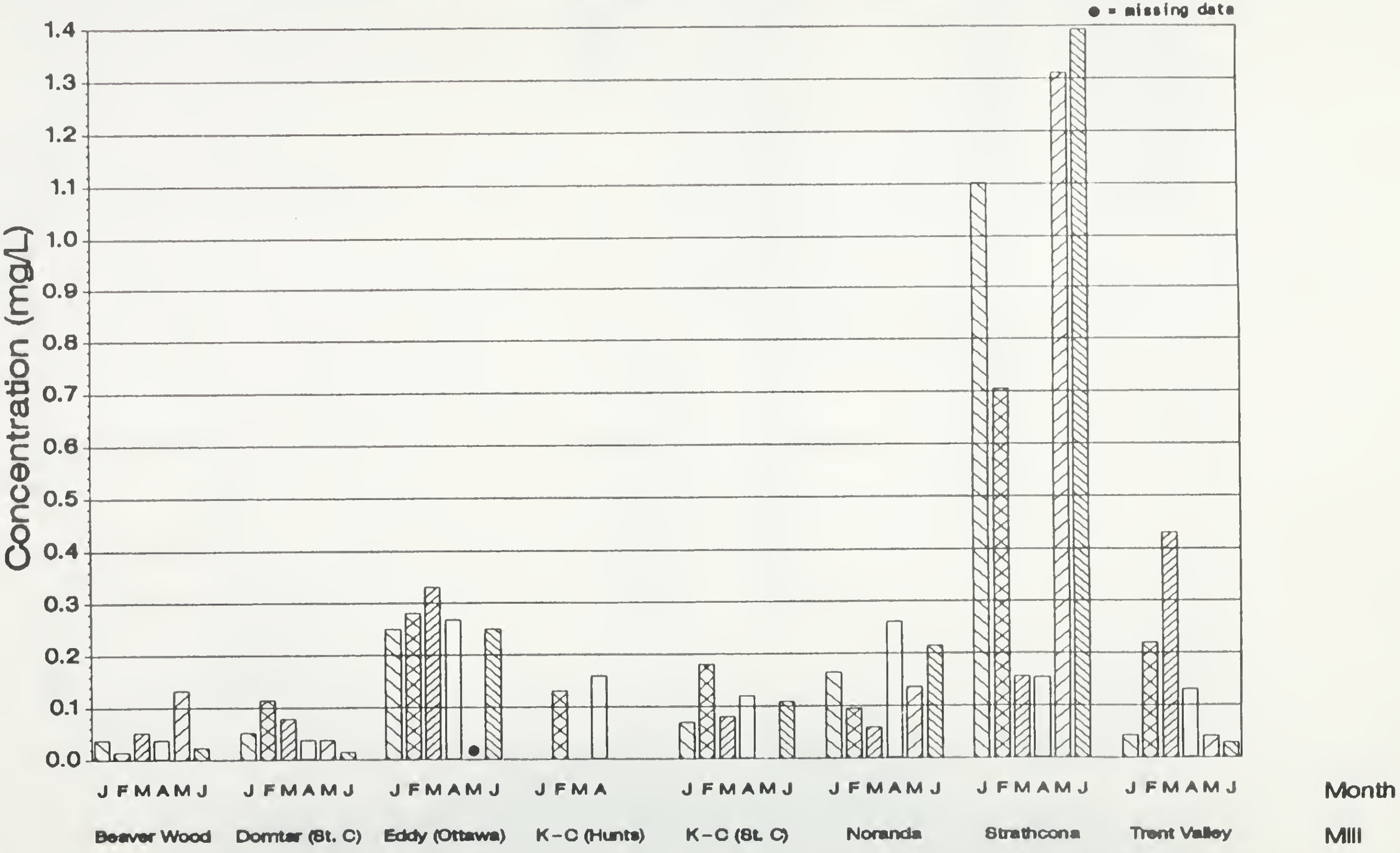


Figure 1.33
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of Total Kjeldahl Nitrogen

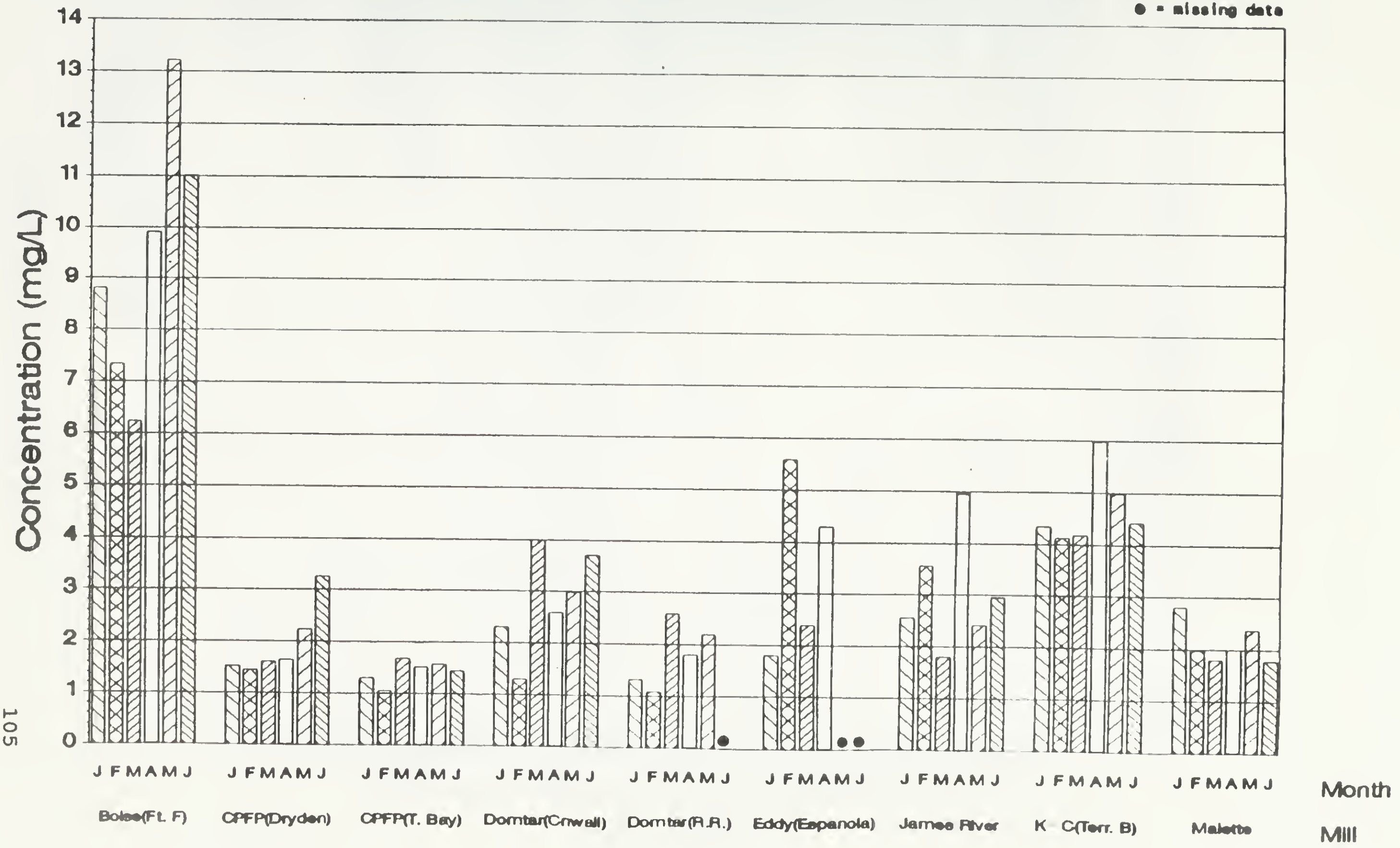


Figure 1.34

Sulphite – Mechanical Mill Process Effluent

Monthly Average Concentration of Total Kjeldahl Nitrogen

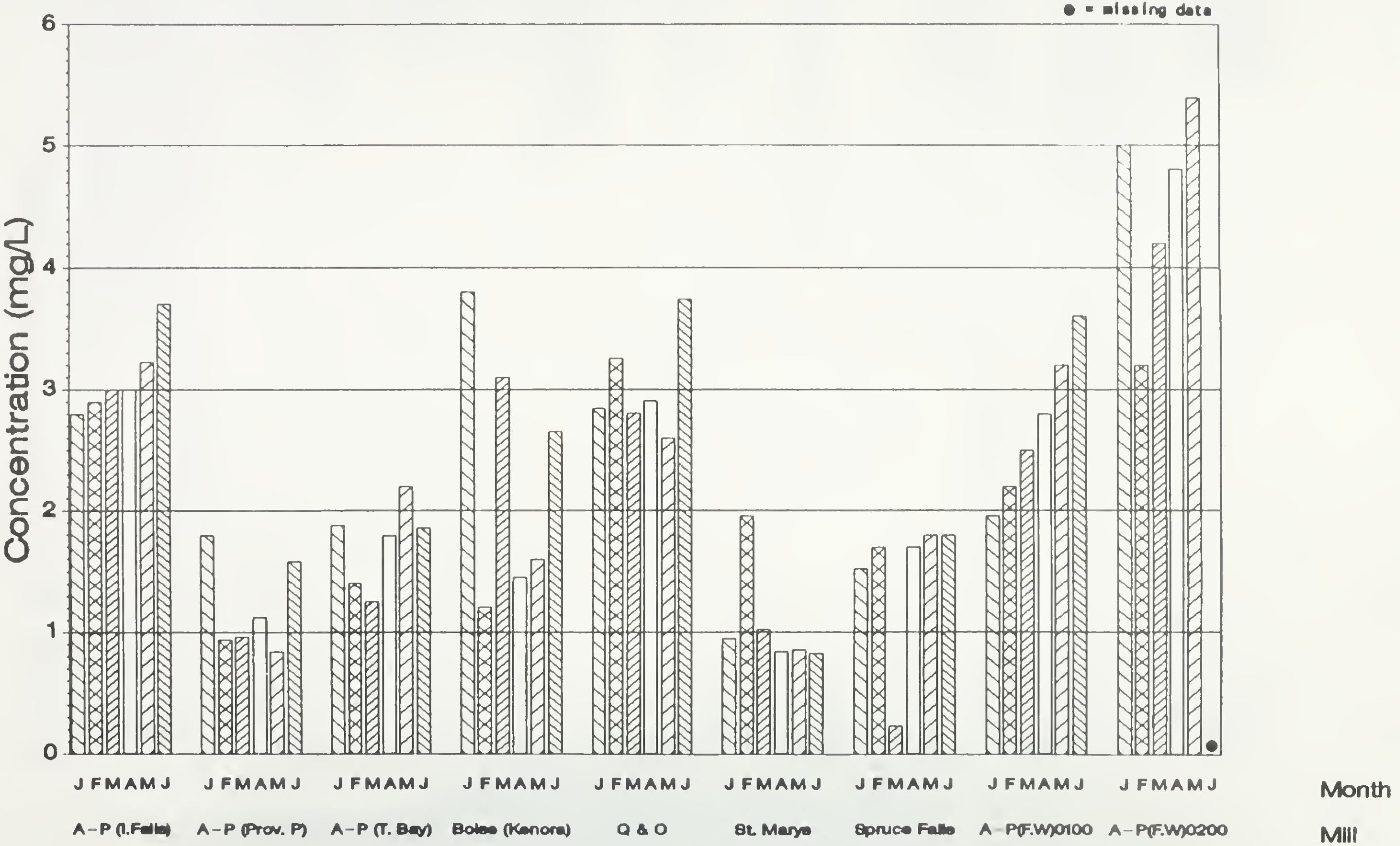


Figure 1.35
Corrugating Mill Process Effluent
Monthly Average Concentration of Total Kjeldahl Nitrogen

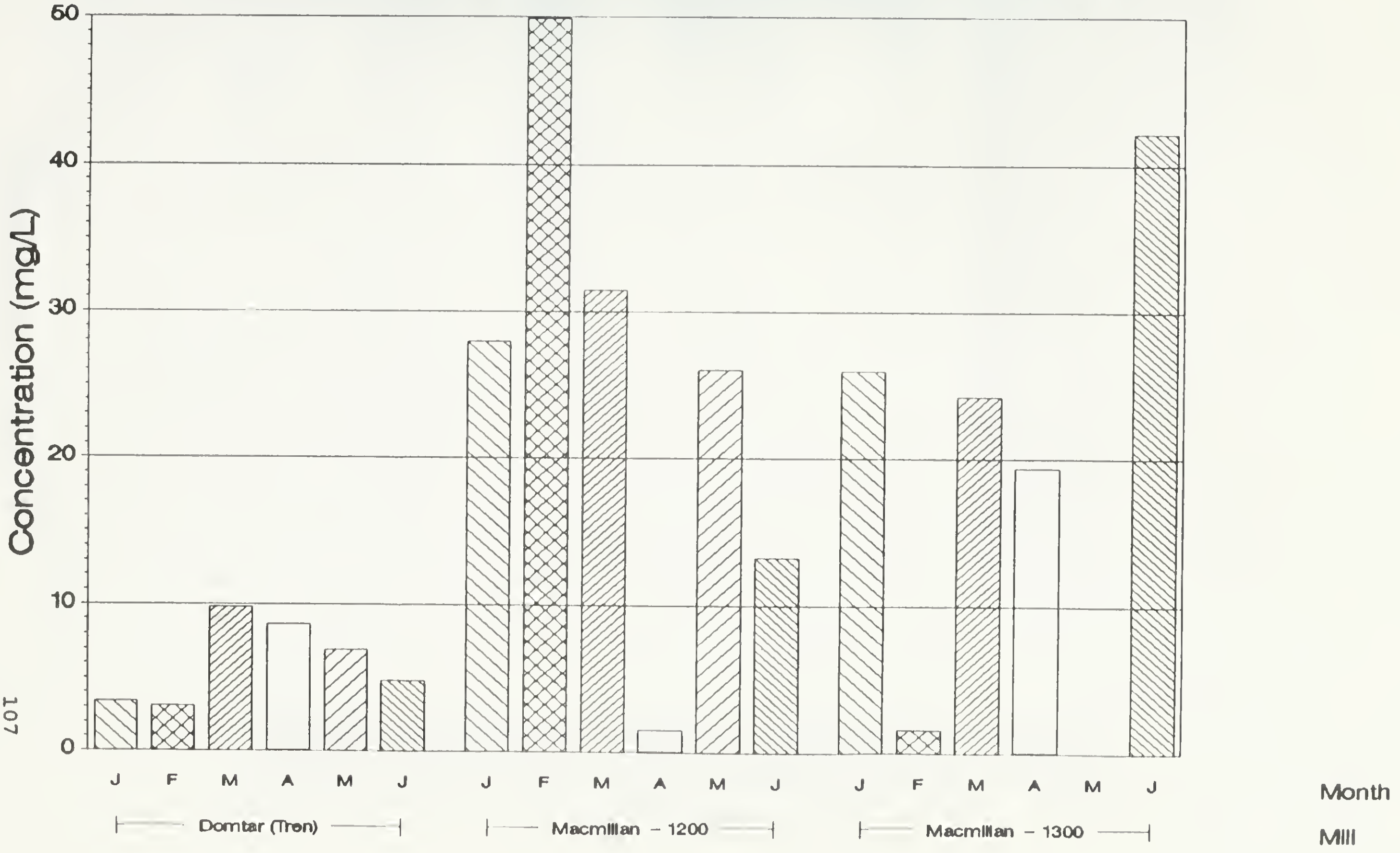


Figure 1.36

Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Total Kjeldahl Nitrogen

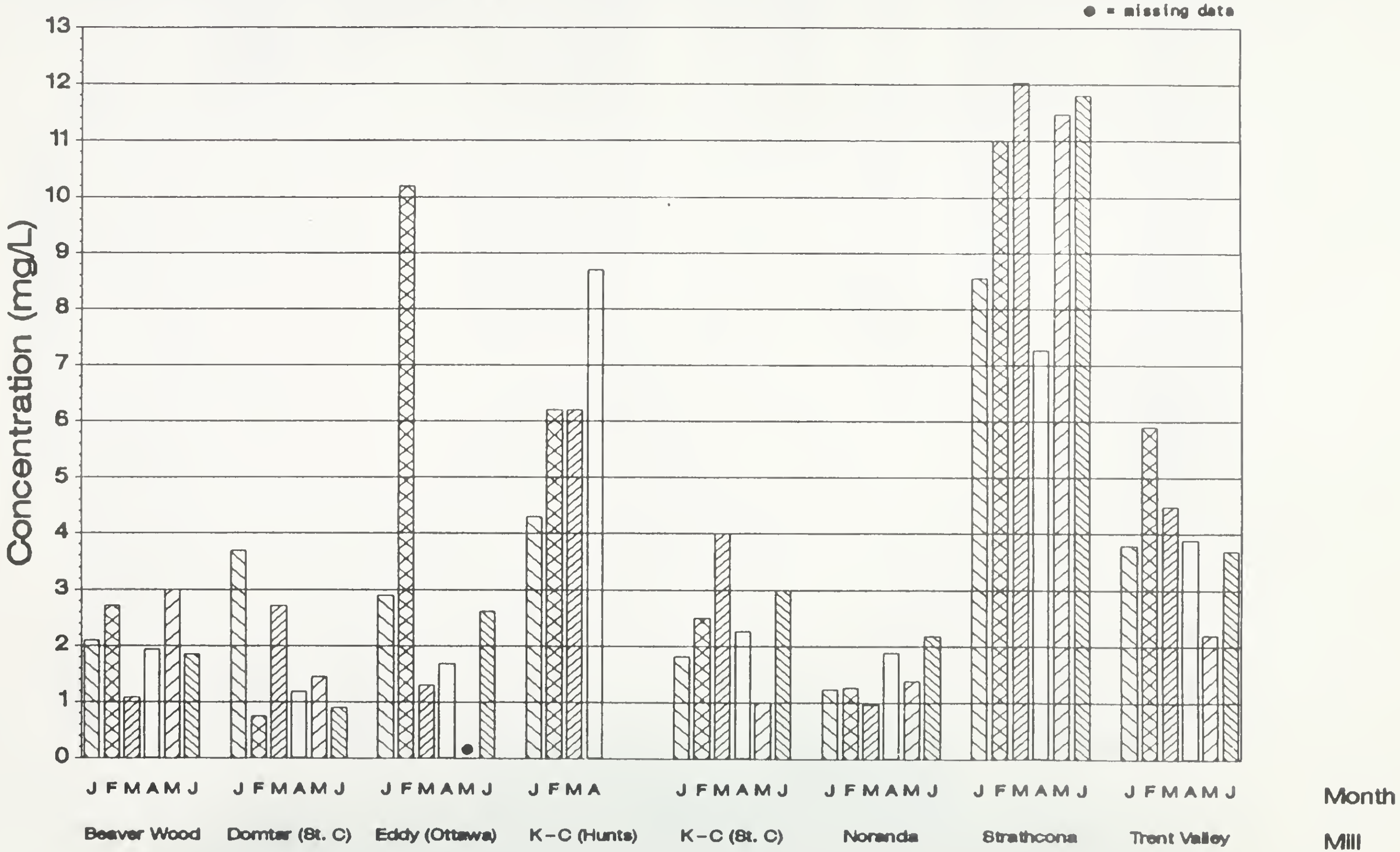


Figure 1.37
Sulphate (Kraft) Mill Process Effluent
Monthly Average Concentration of Nitrate and Nitrite

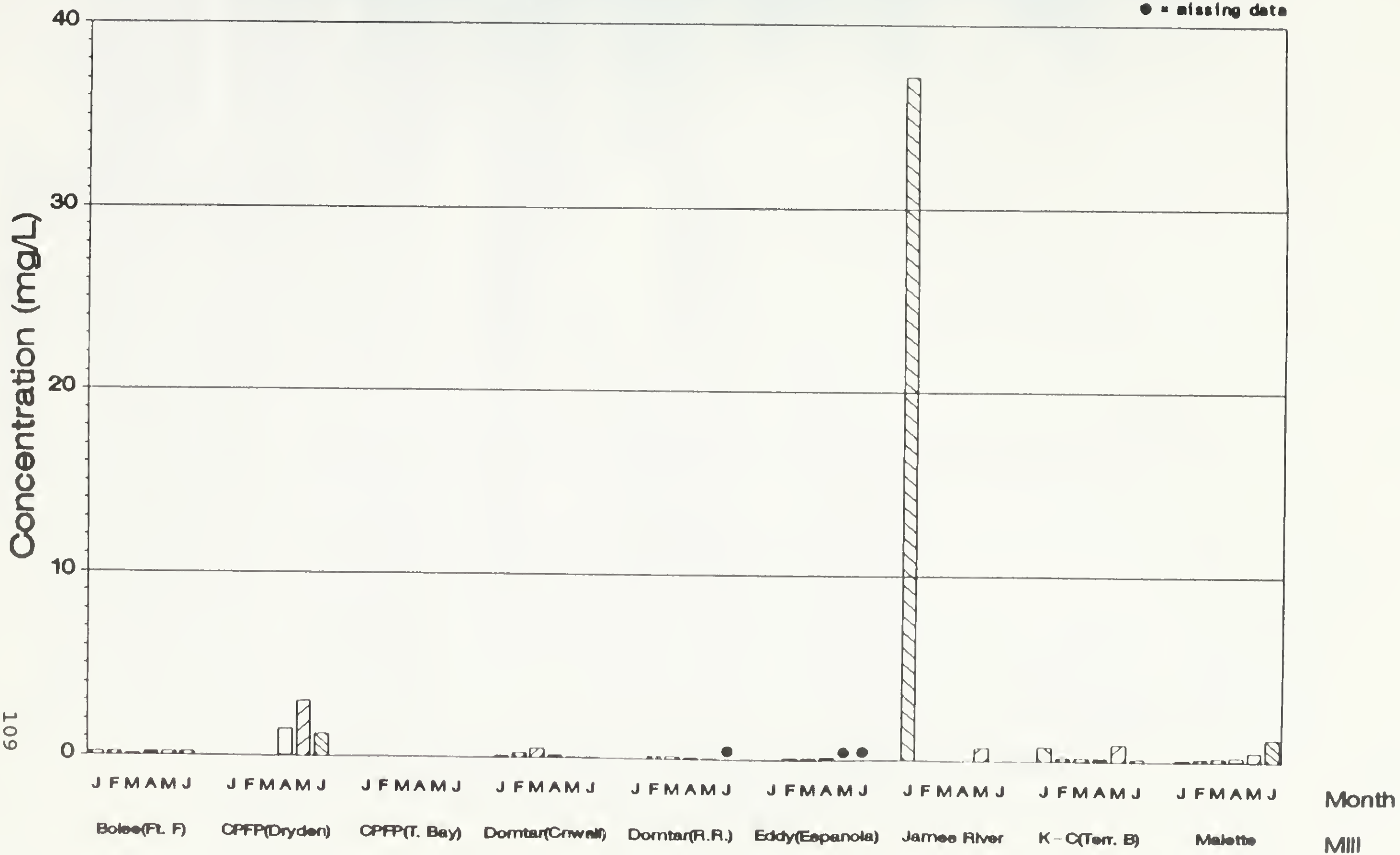


Figure 1.38

Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of Nitrate and Nitrite

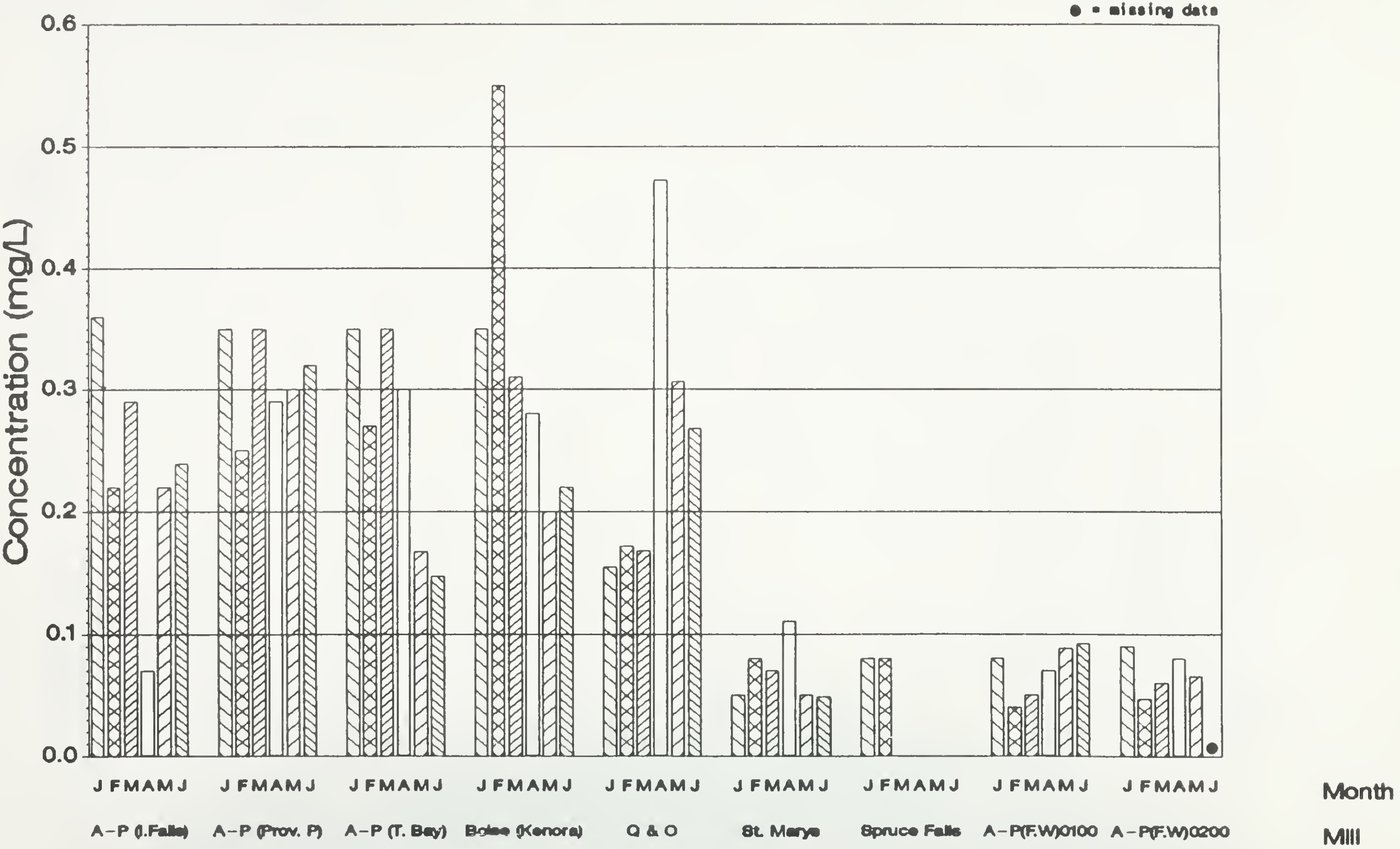


Figure 1.39
Corrugating Mill Process Effluent
Monthly Average Concentration of Nitrate and Nitrite

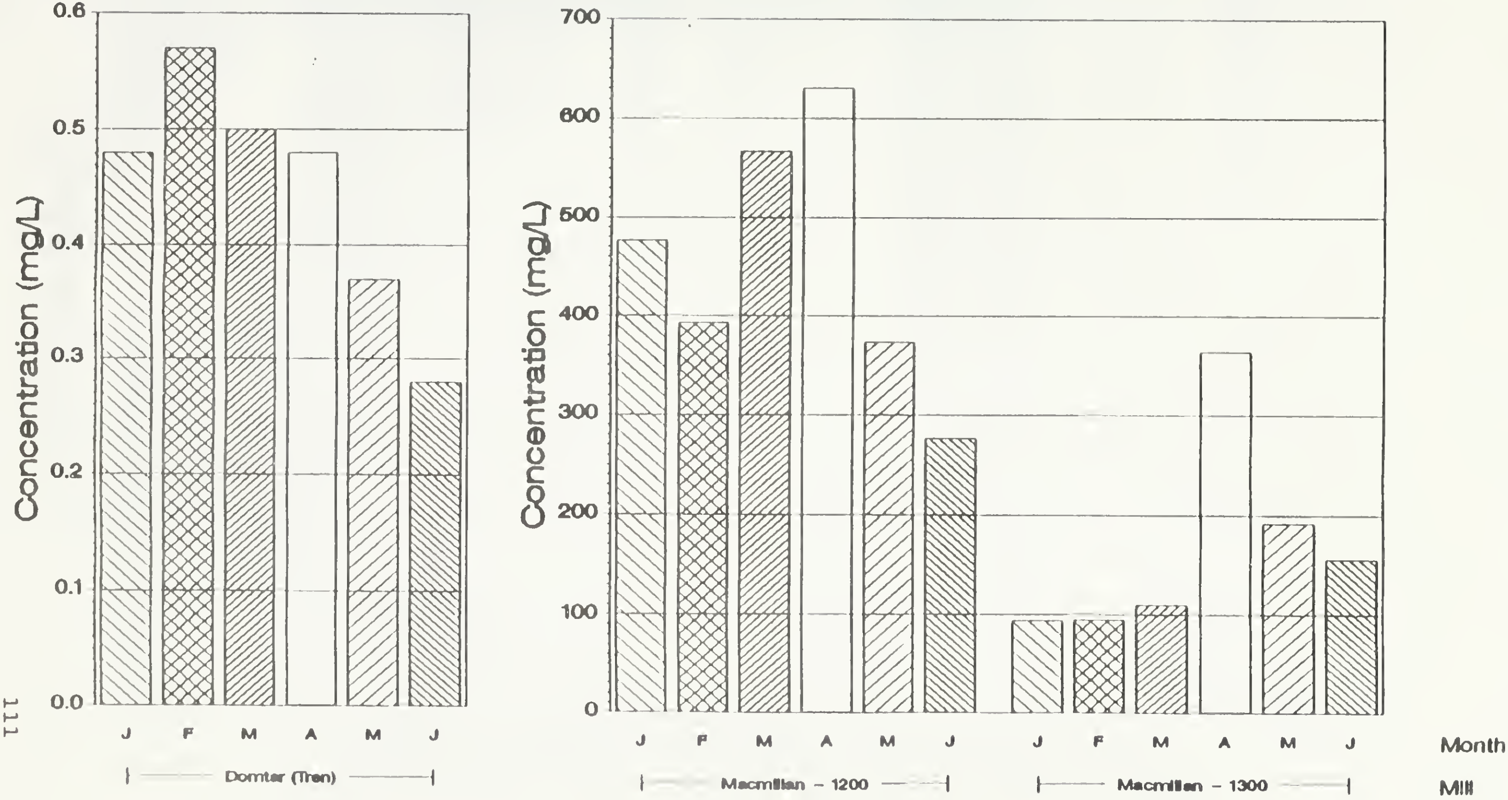


Figure 1.40
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Concentration of Nitrate and Nitrite

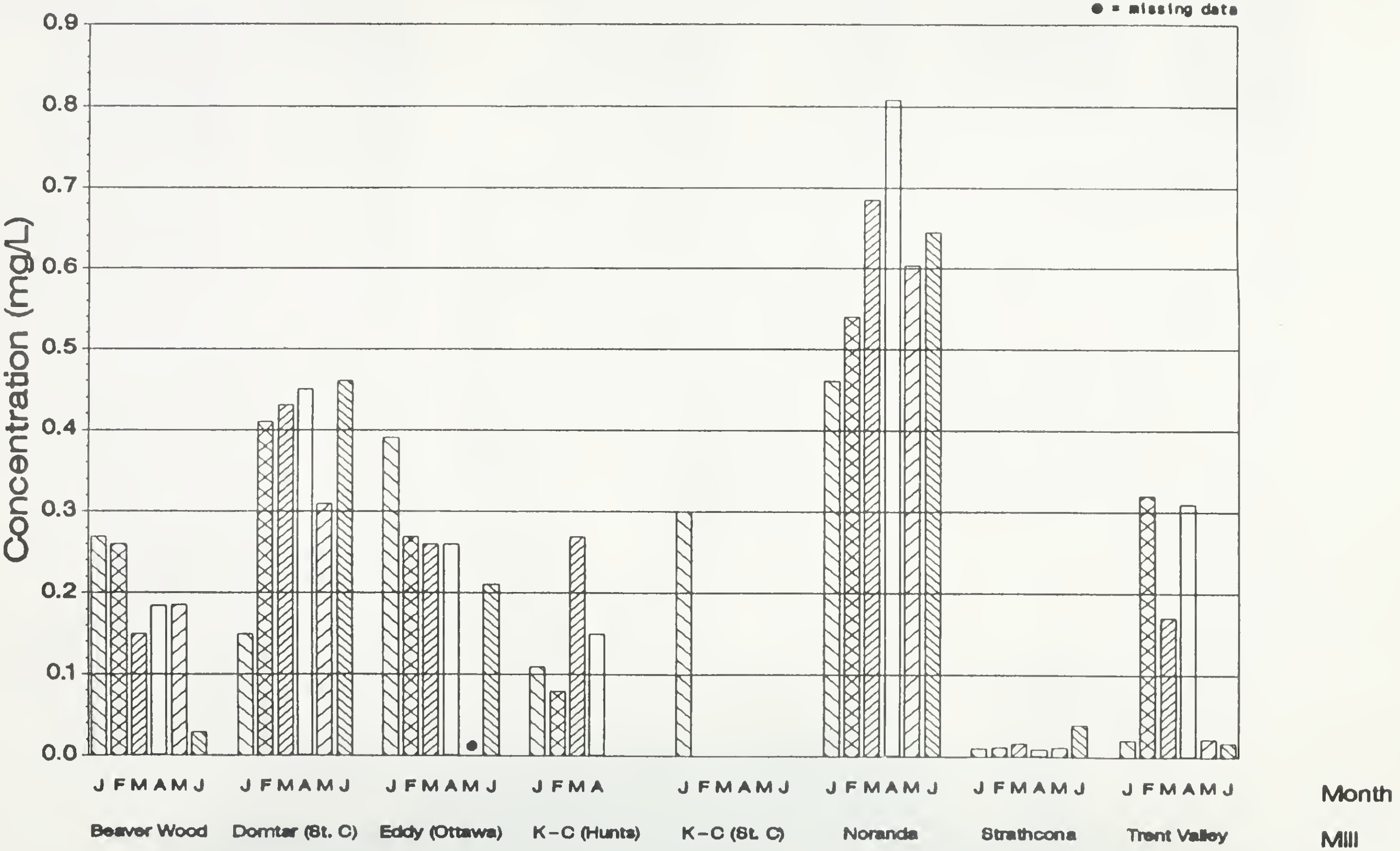


Figure 1.41

Sulphate (Kraft) Mill Process Effluent

Monthly Average Concentration of Phosphorus

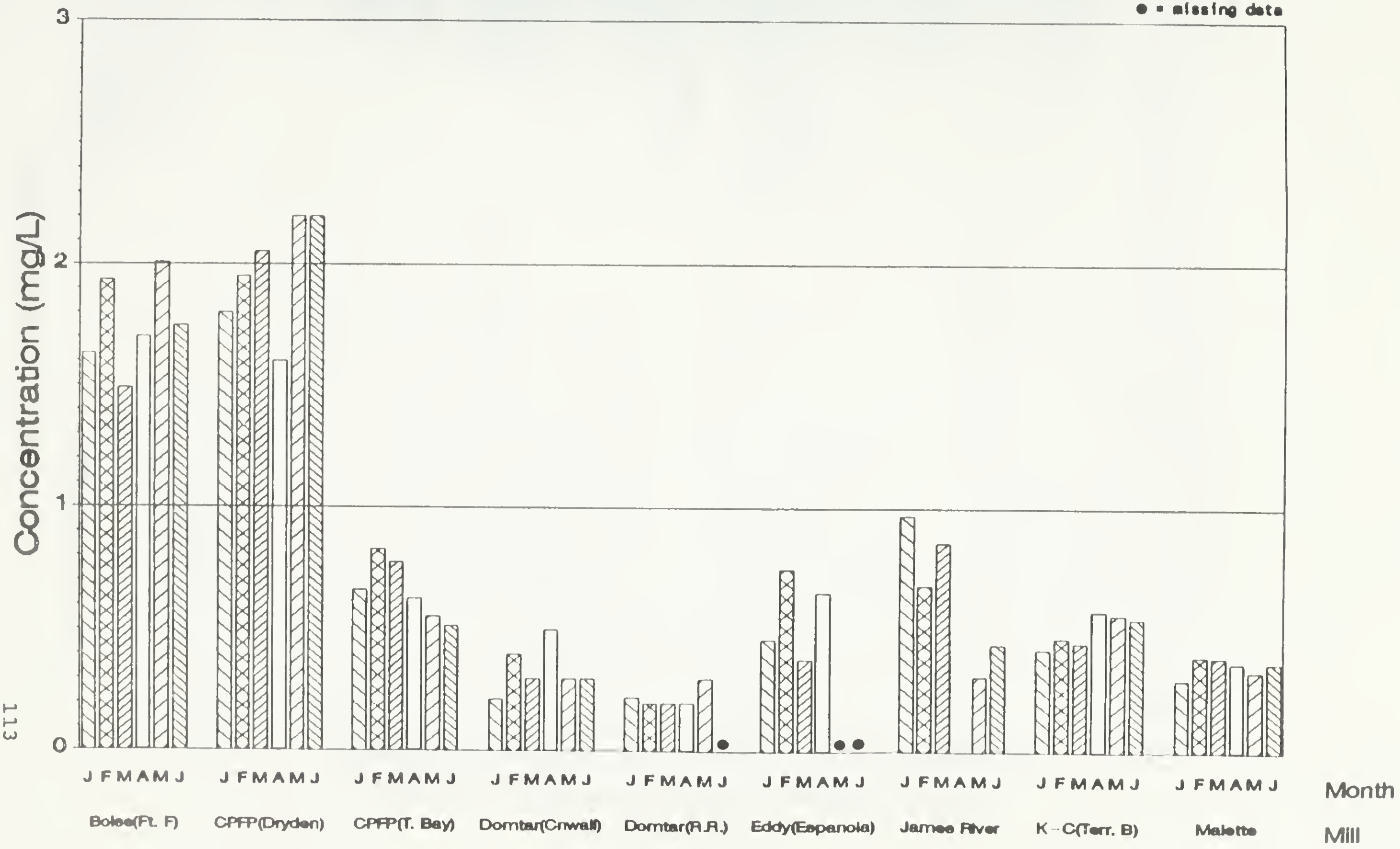


Figure 1.42
Sulphite – Mechanical Mill Process Effluent
Monthly Average Concentration of Phosphorus

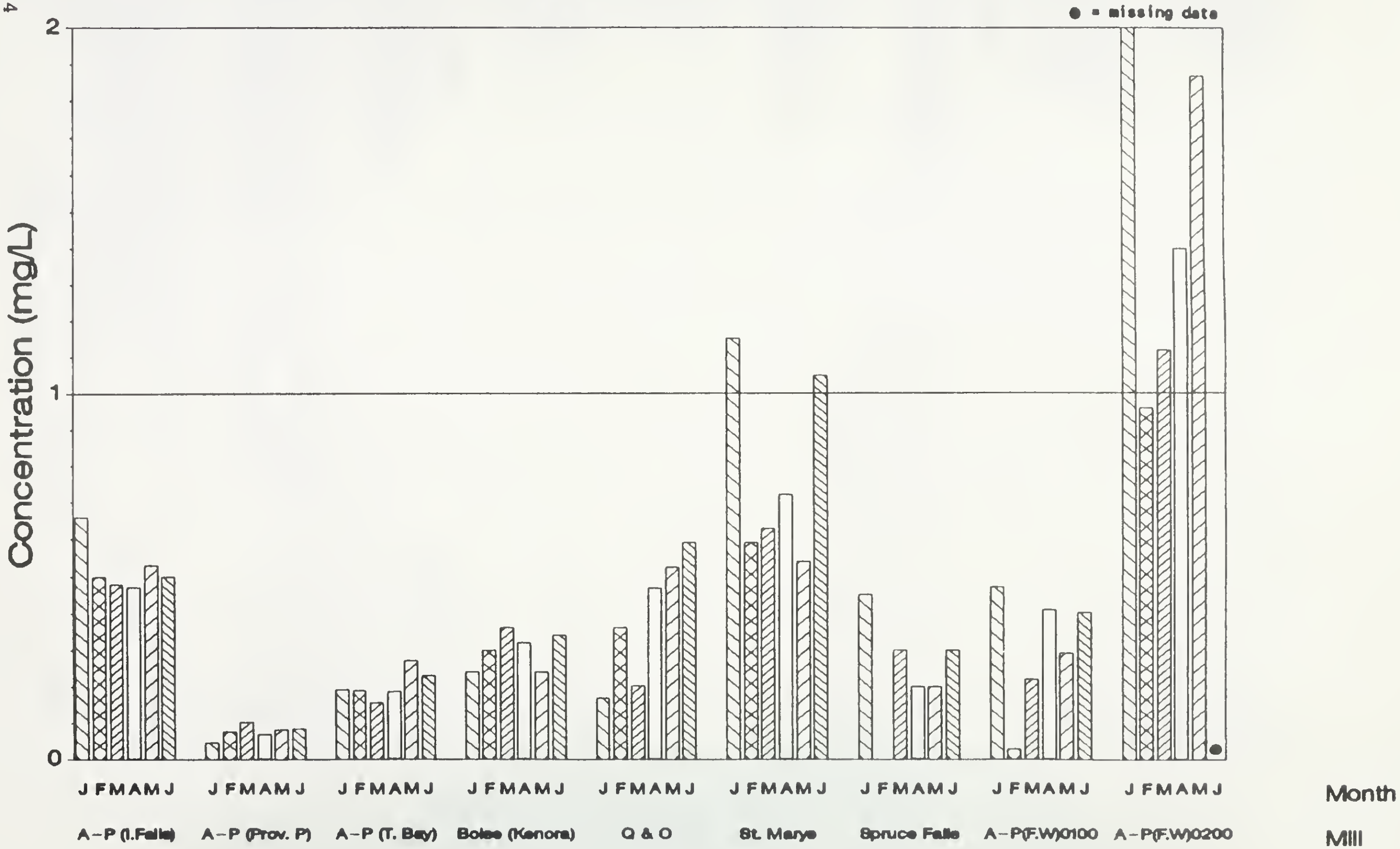


Figure 1.43
Corrugating Mill Process Effluent
Monthly Average Concentration of Phosphorus

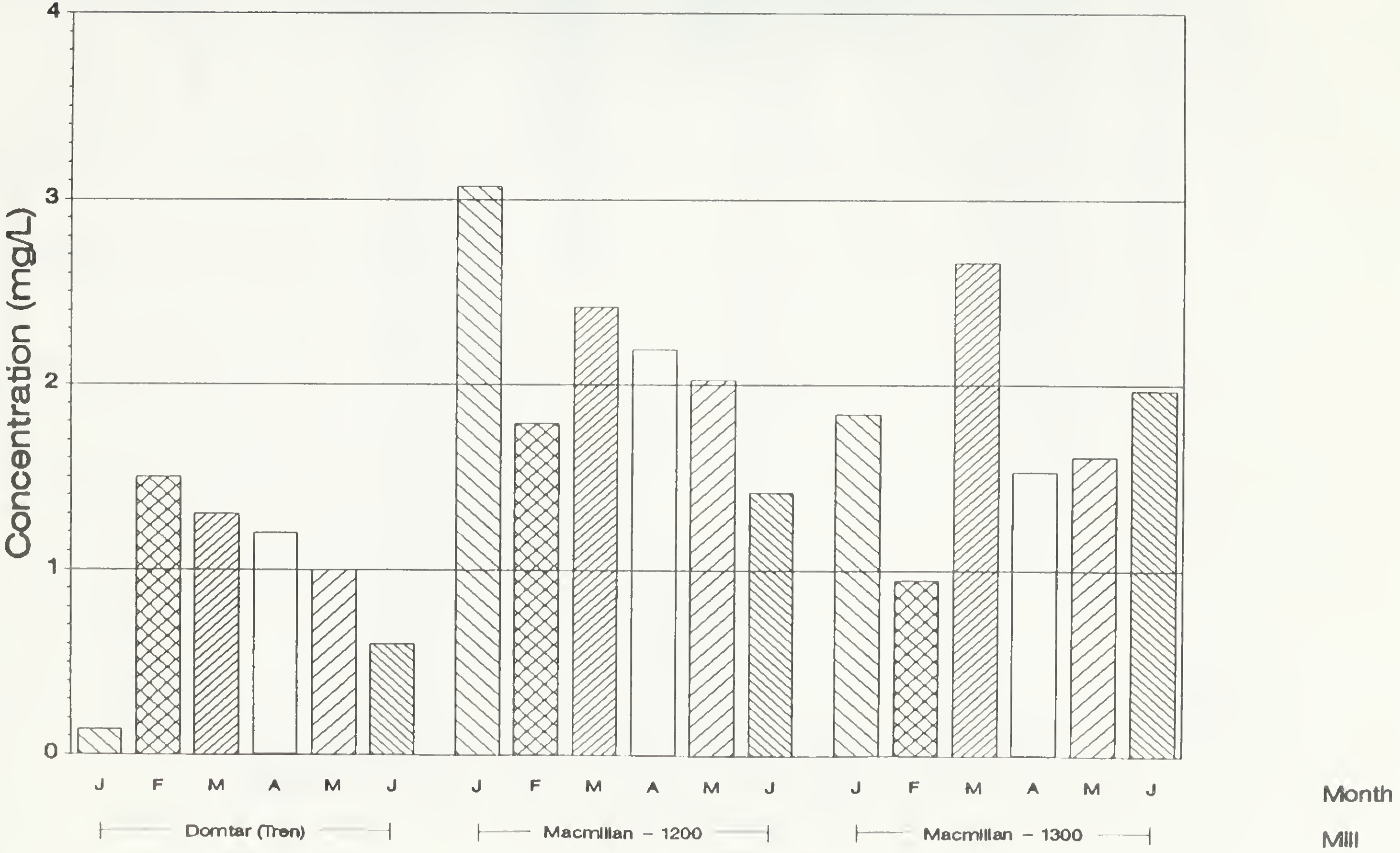


Figure 1.44

Deinking – Board – Fine Papers – Tissue Mill Process Effluent

Monthly Average Concentration of Phosphorus

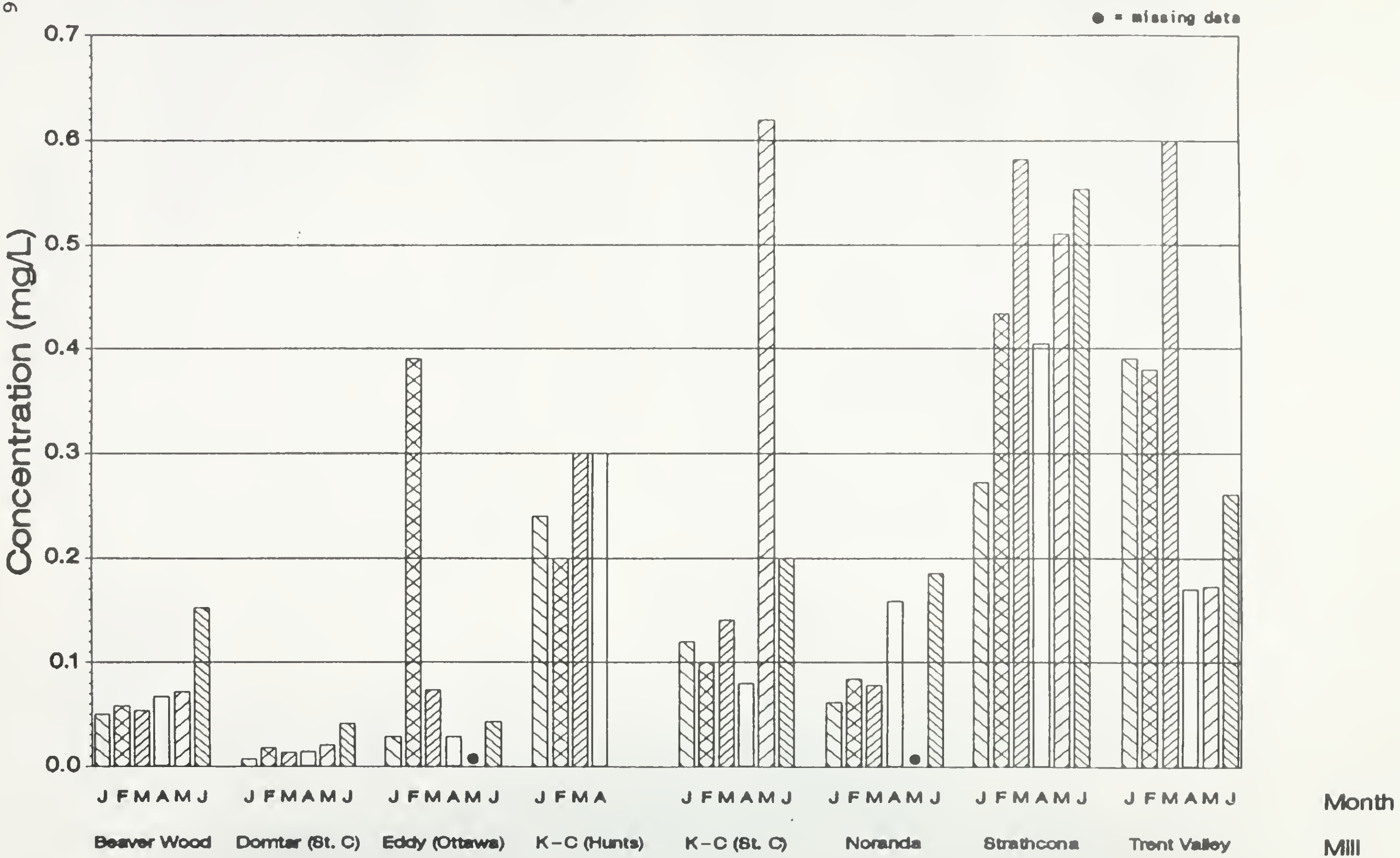


Figure 2.1
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of 5-Day Biological Oxygen Demand

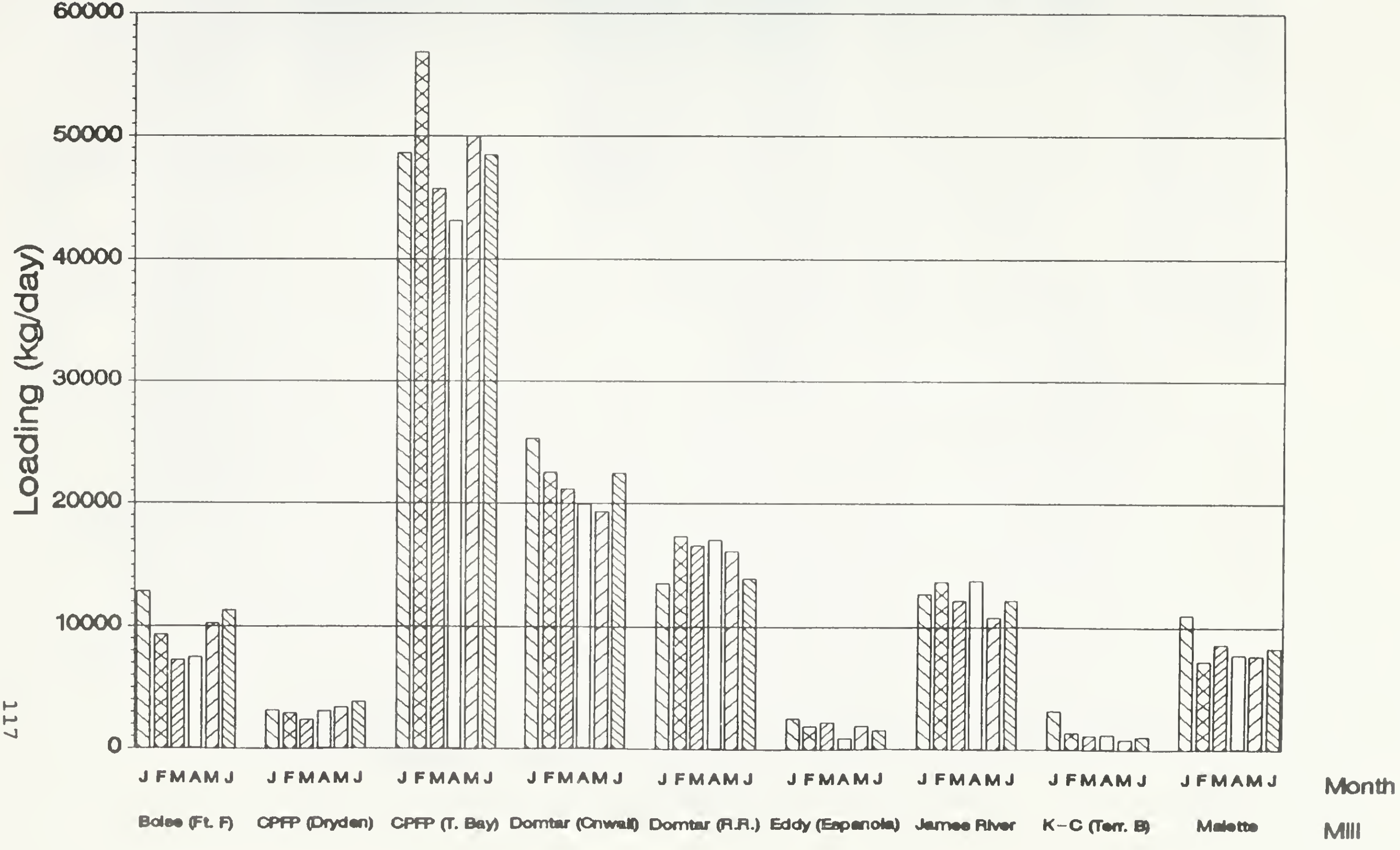


Figure 2.2

Sulphite-Mechanical Mill Process Effluent

Monthly Average Loading of 5-Day Biological Oxygen Demand

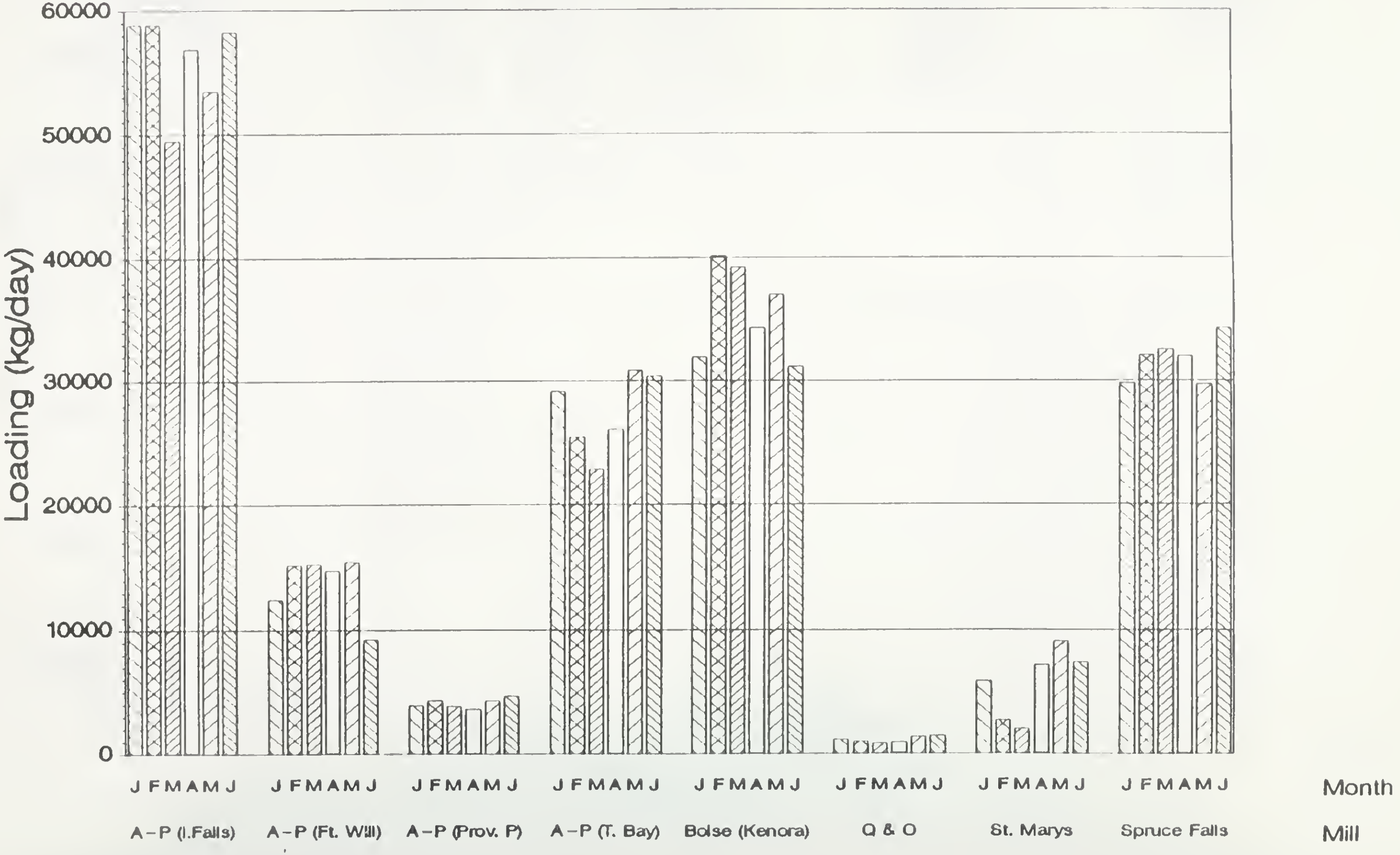


Figure 2.3
Corrugating Mill Process Effluent
Monthly Average Loading of 5-Day Biological Oxygen Demand

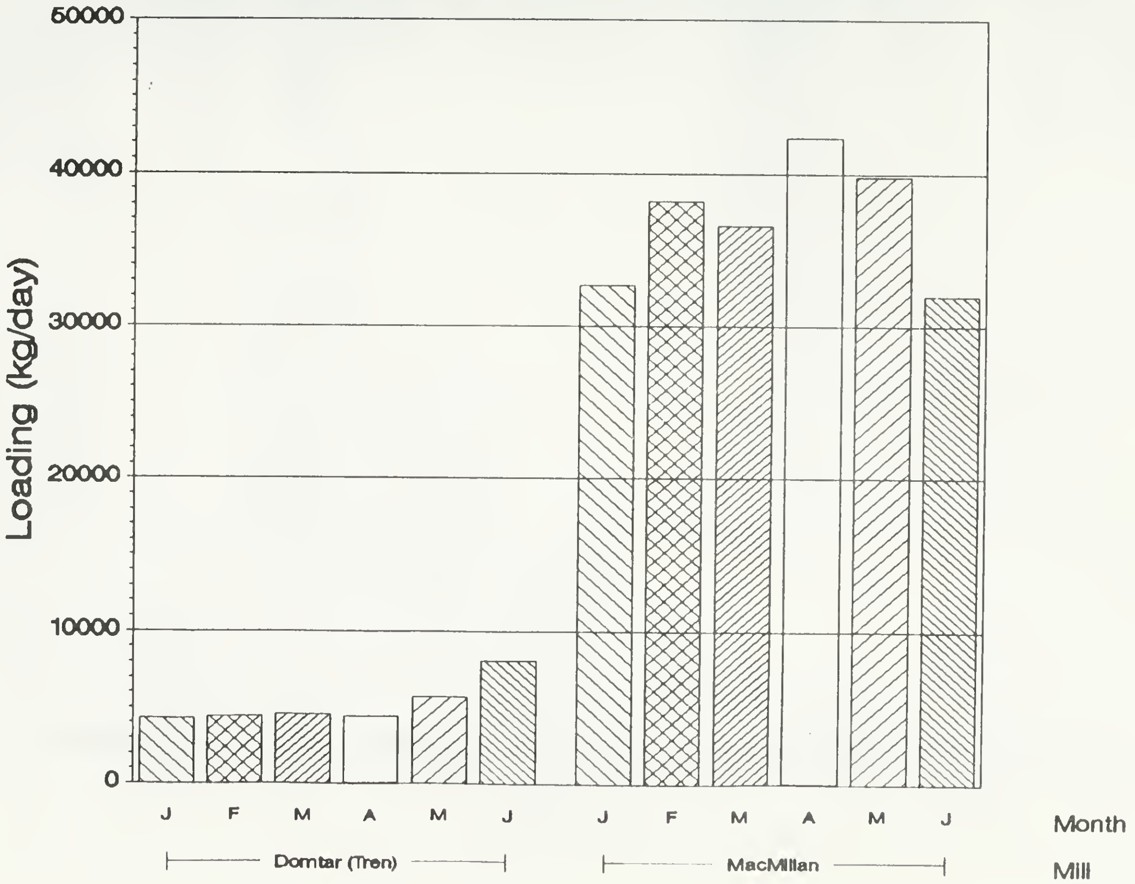


Figure 2.4
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of 5 – Day Biological Oxygen Demand

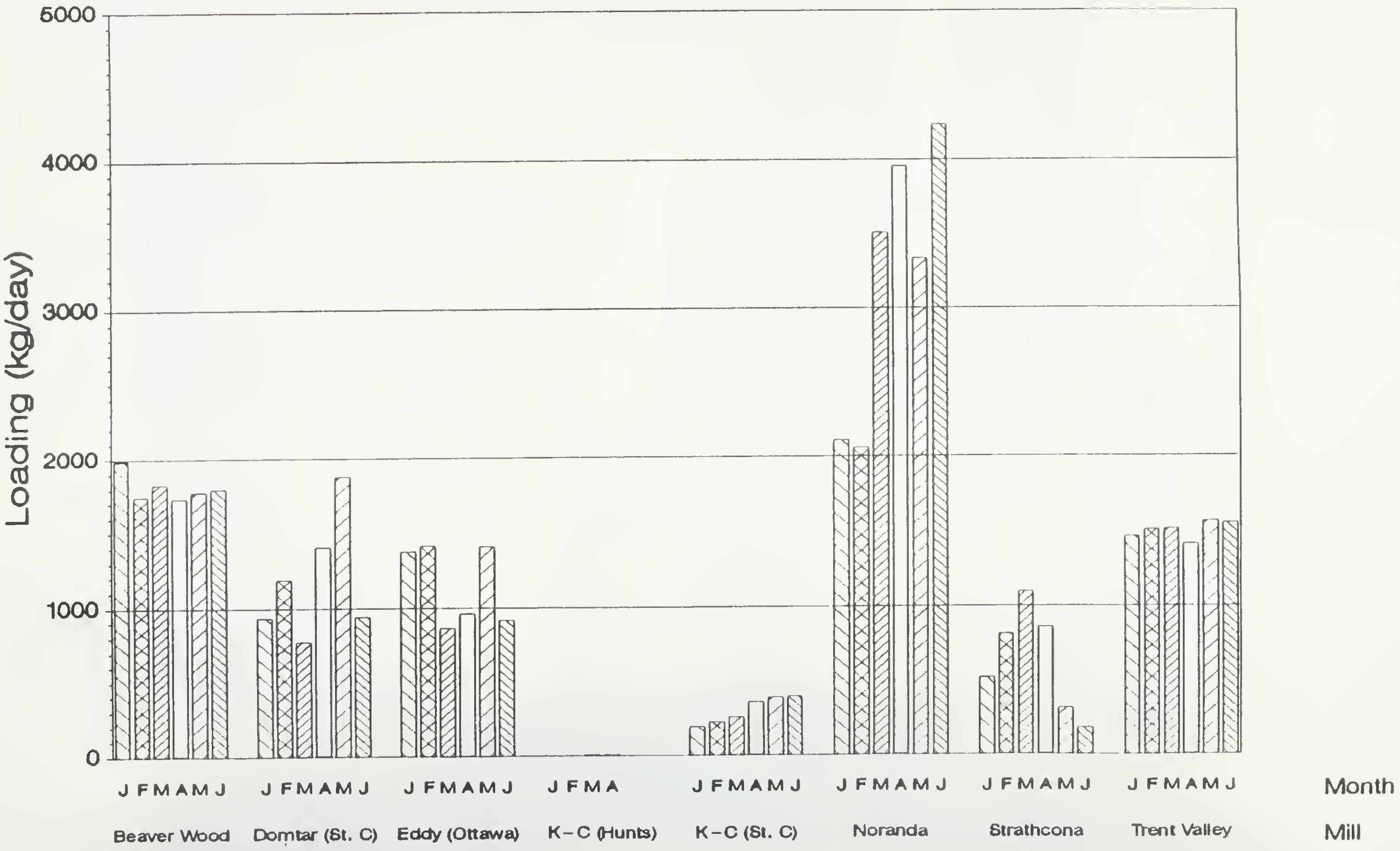


Figure 2.5

Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Total Suspended Solids

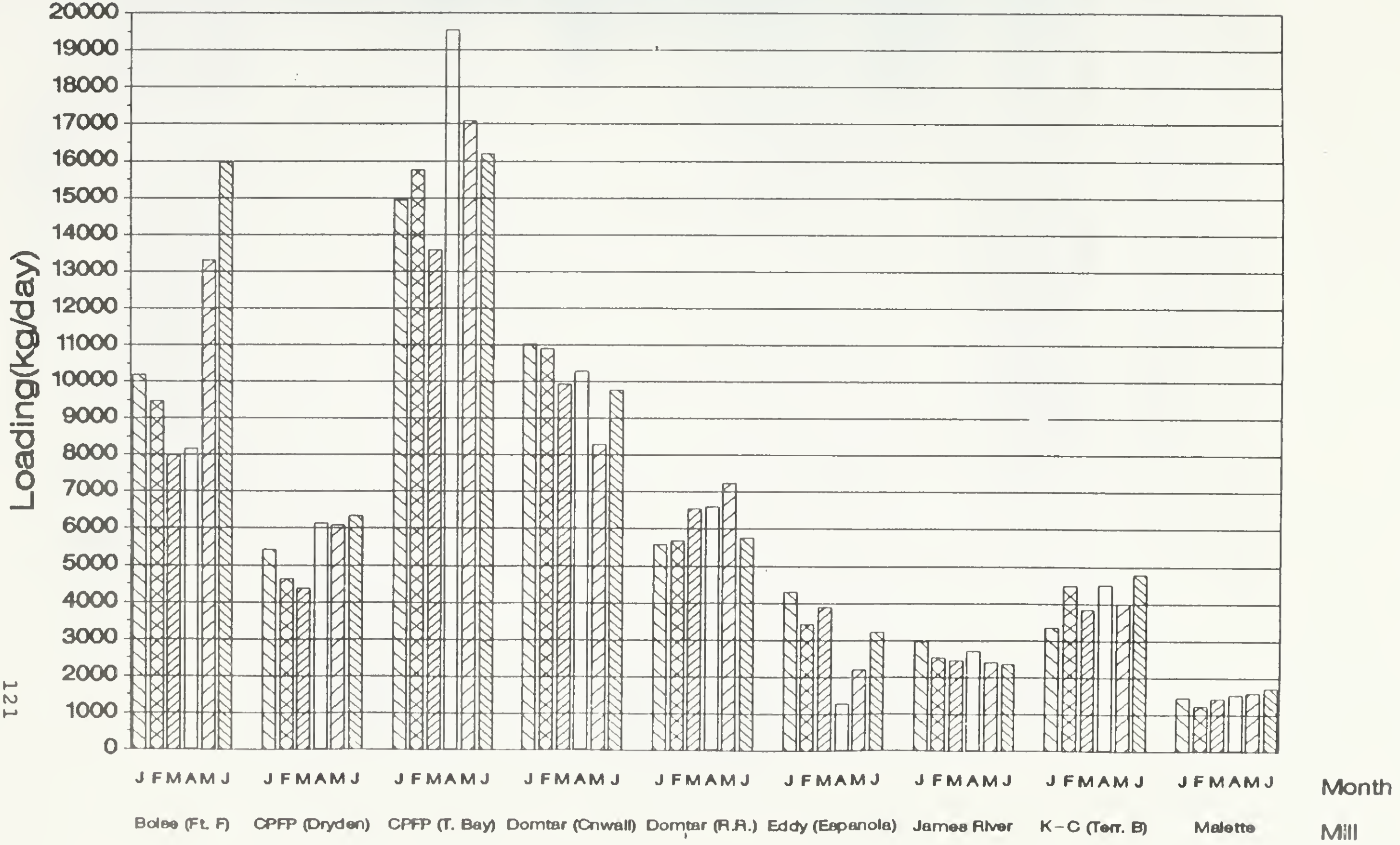


Figure 2.6

Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Total Suspended Solids

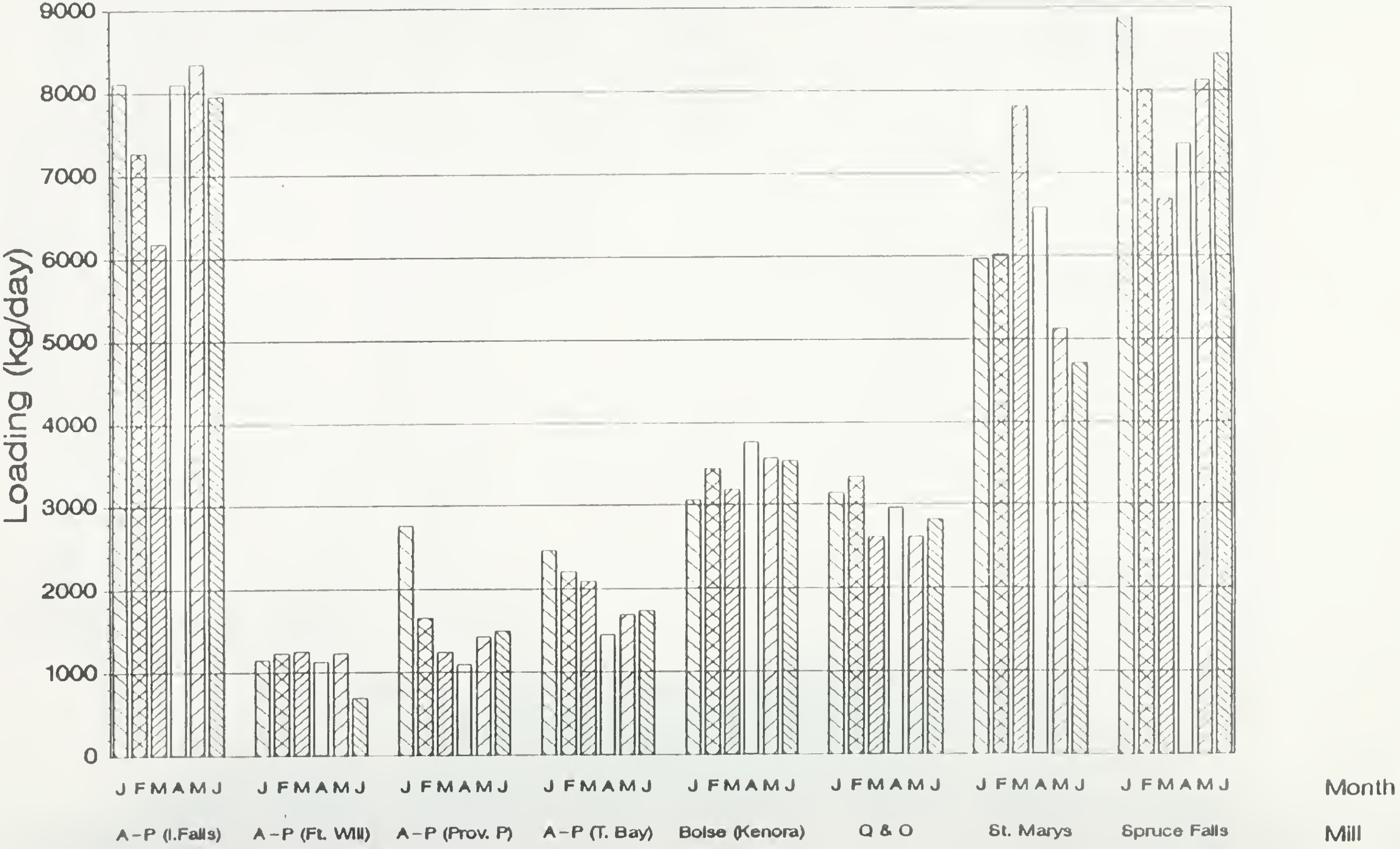


Figure 2.7

Corrugating Mill Process Effluent
Monthly Average Loading of Total Suspended Solids

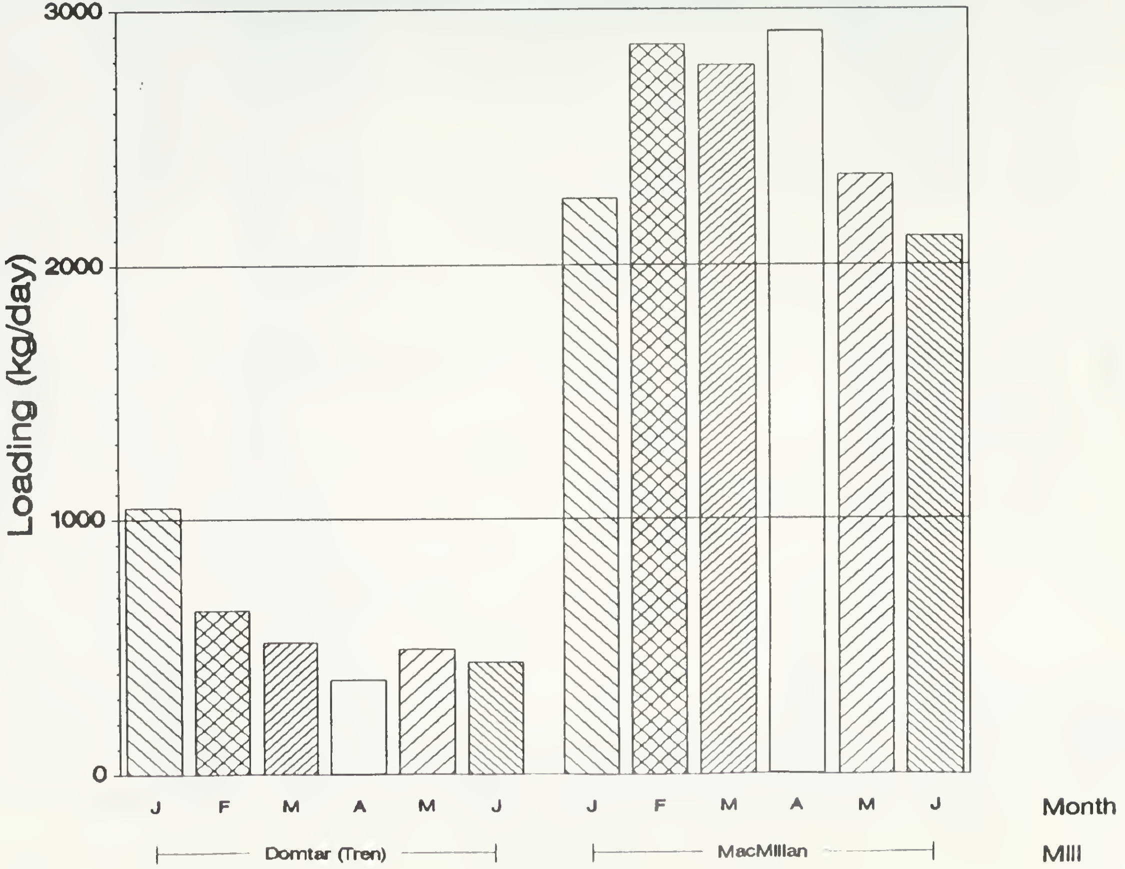


Figure 2.8
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of Total Suspended Solids

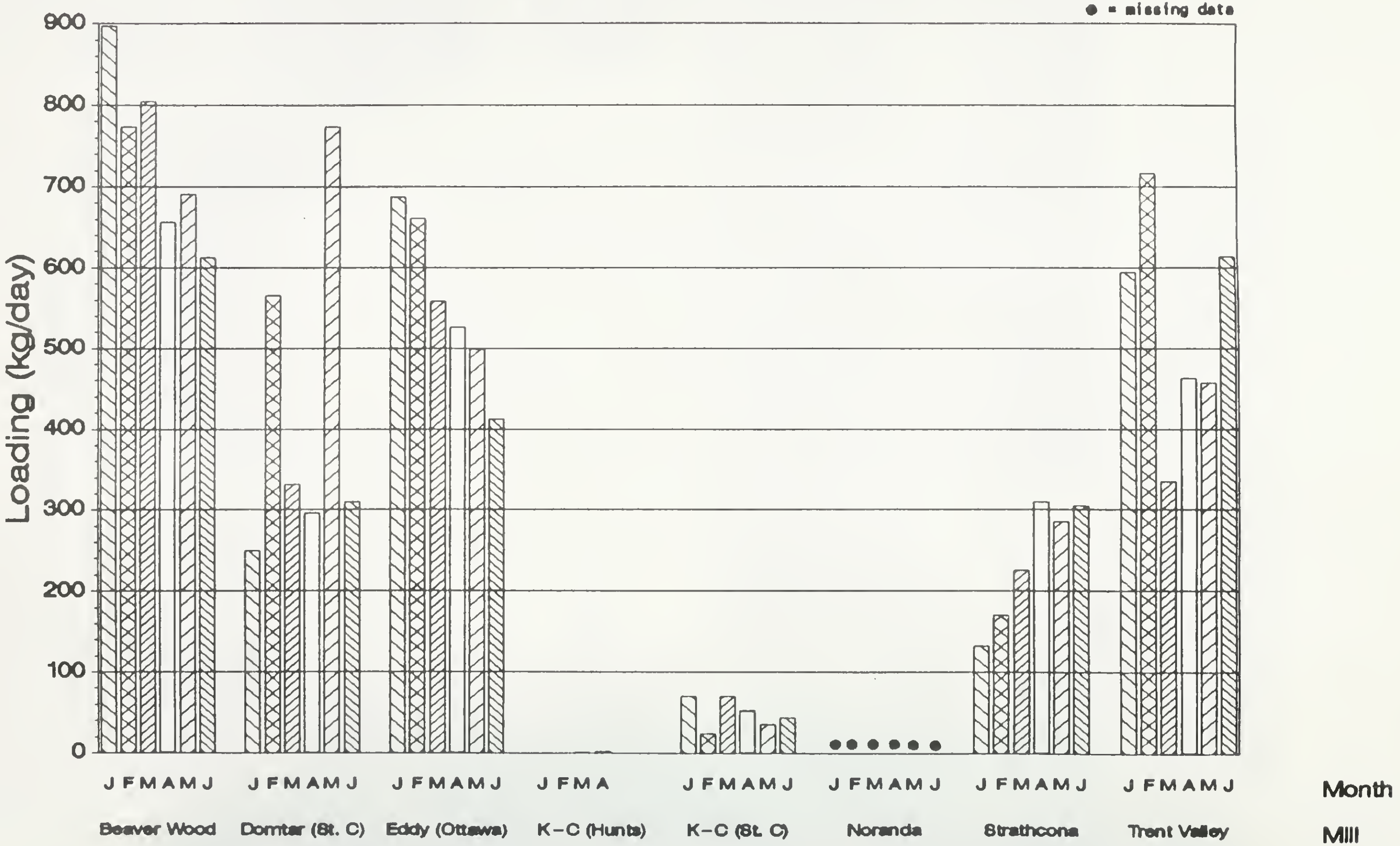


Figure 2.9
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Adsorbable Organic Halide

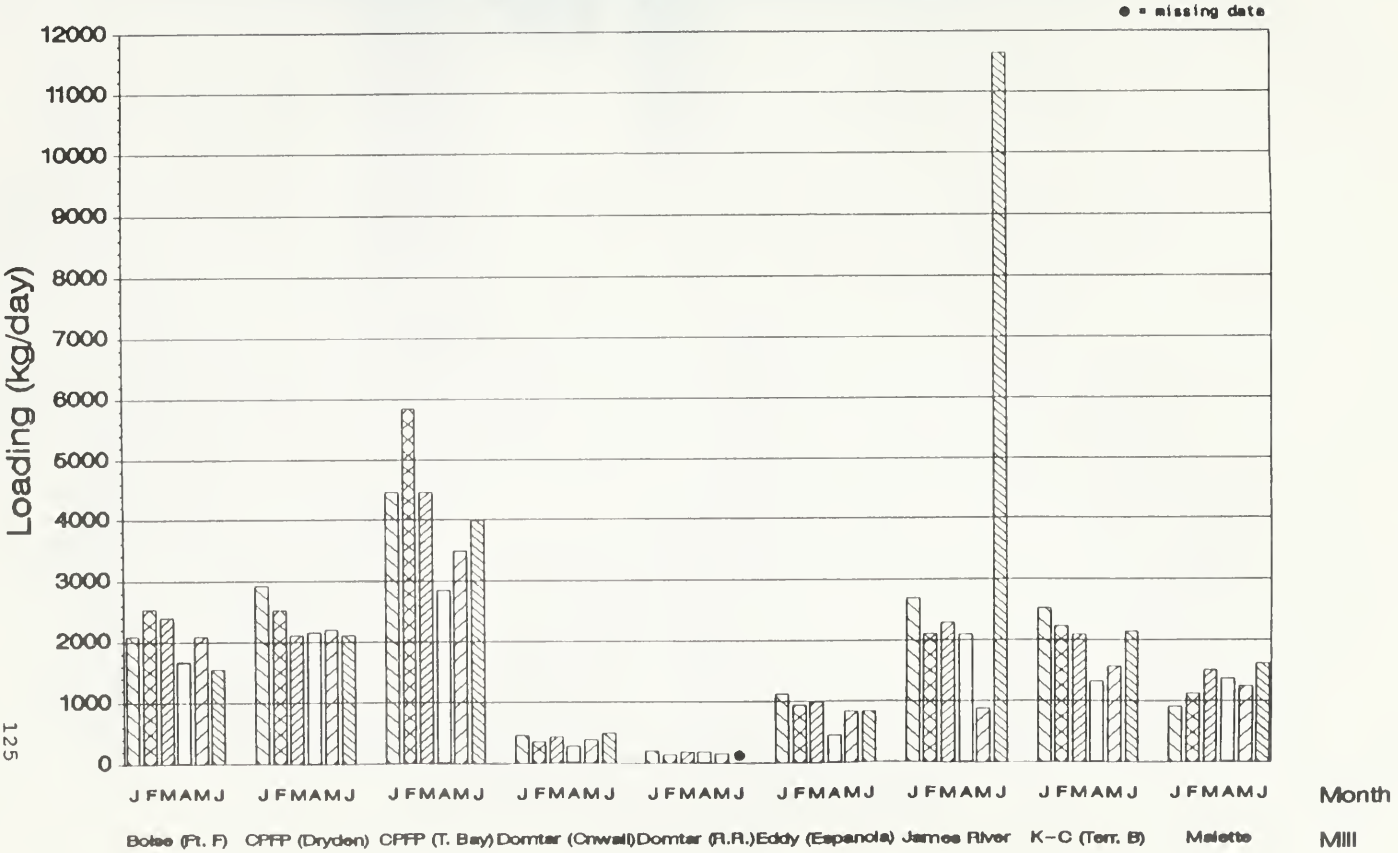


Figure 2.10
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Dehydroabietic Acid

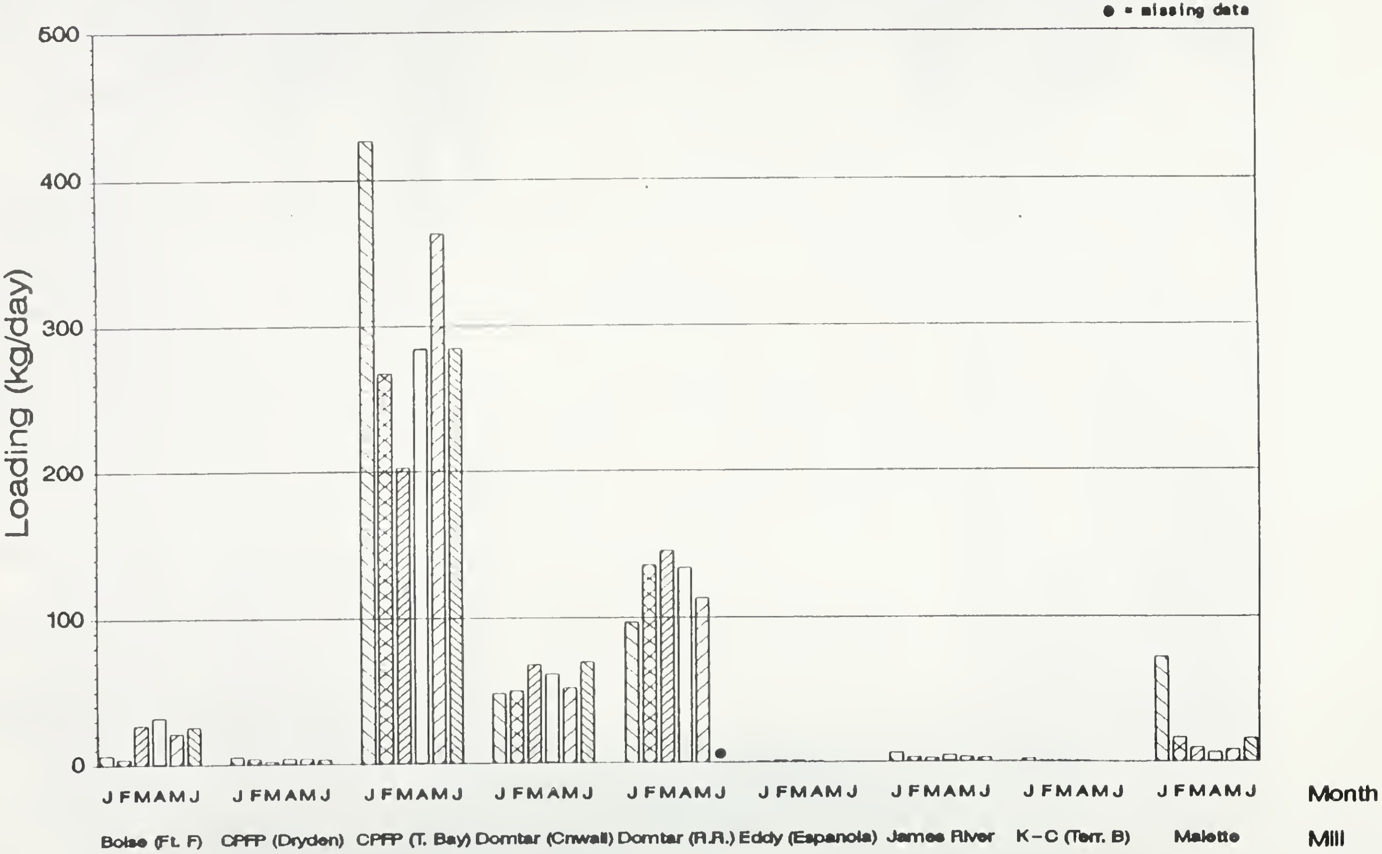


Figure 2.11

Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Dehydroabietic Acid

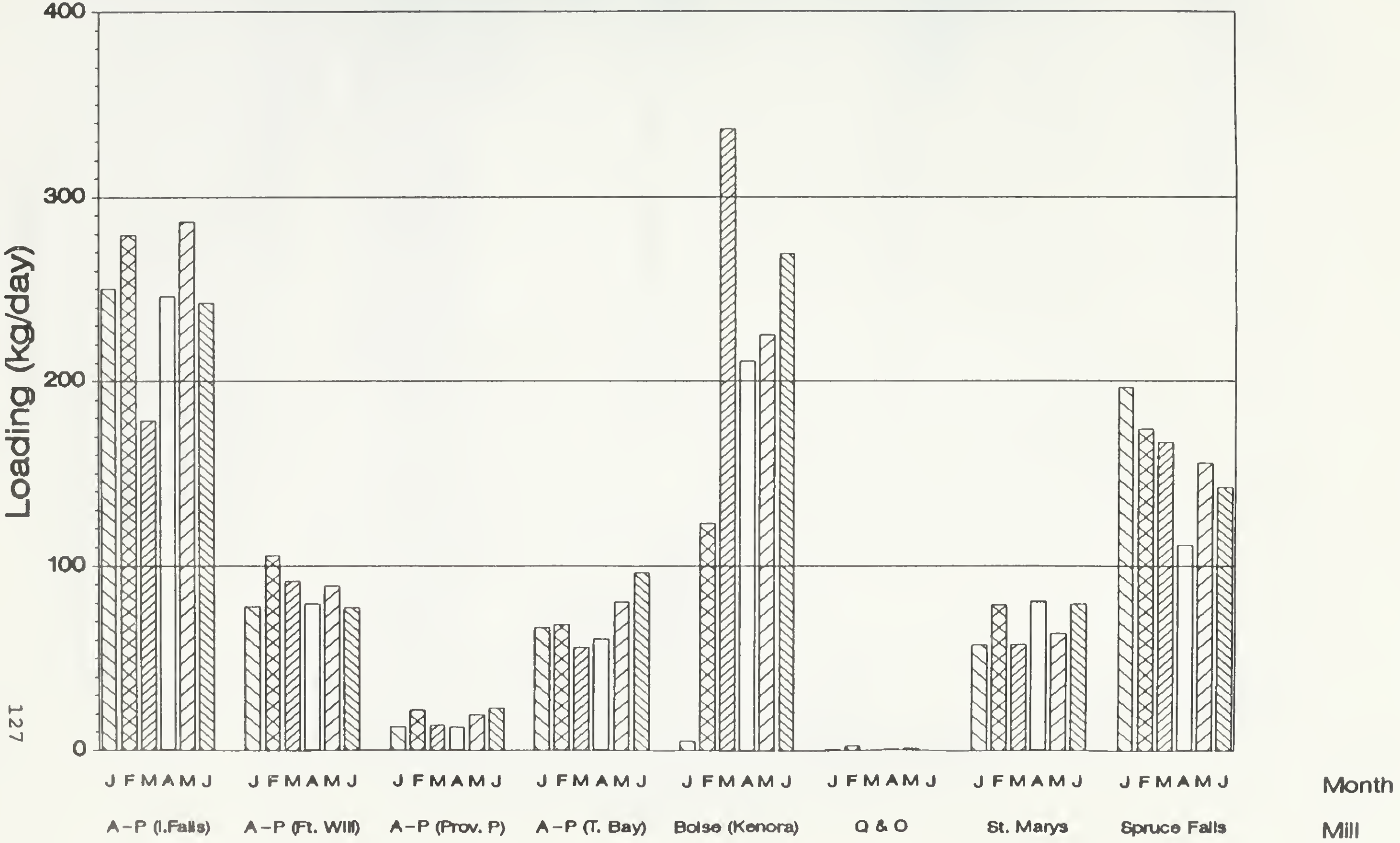


Figure 2.12
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Dichlorodehydroabietic Acid

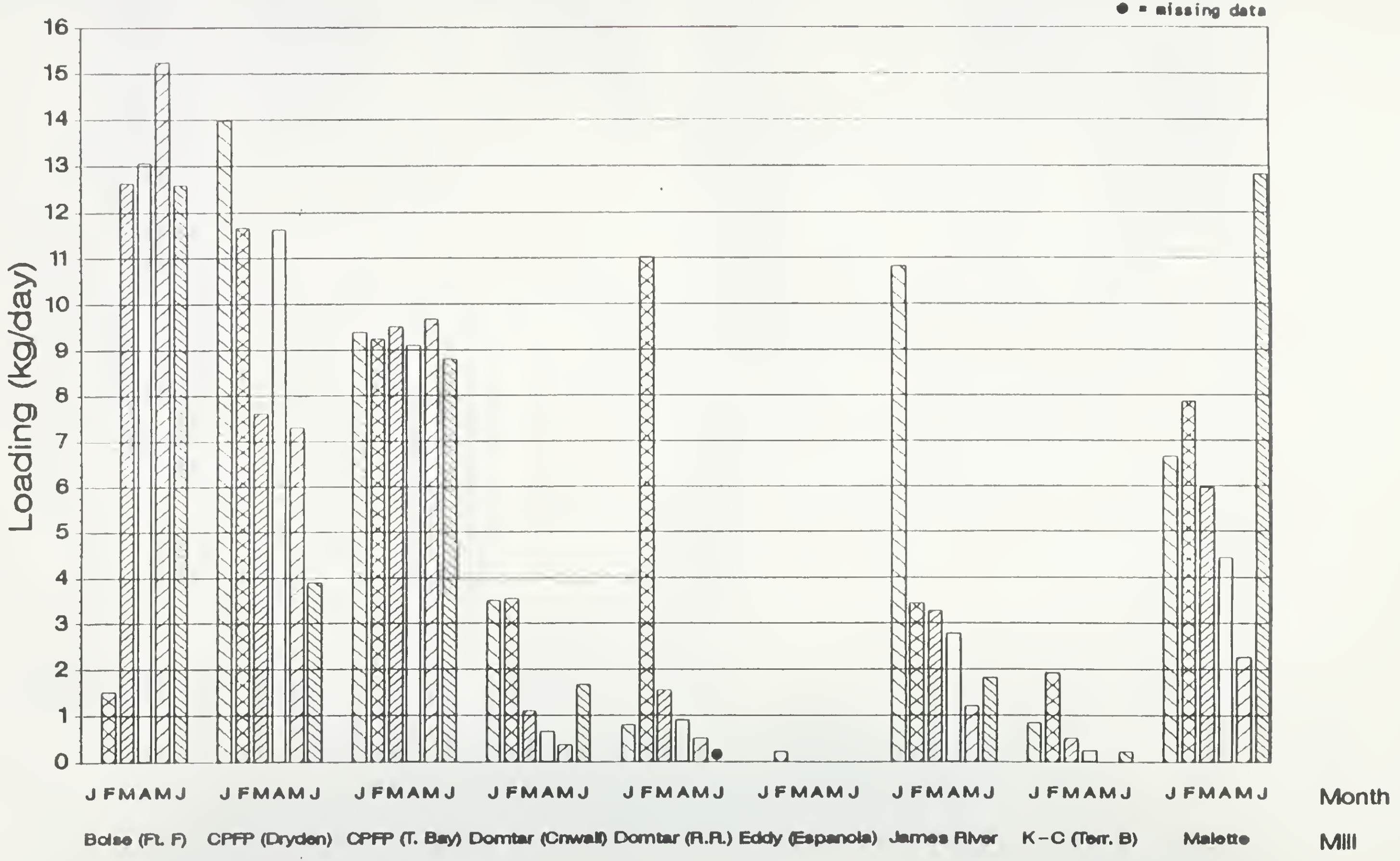


Figure 2.13

Sulphate (Kraft) Mill Process Effluent Monthly Average Loading of Aluminum

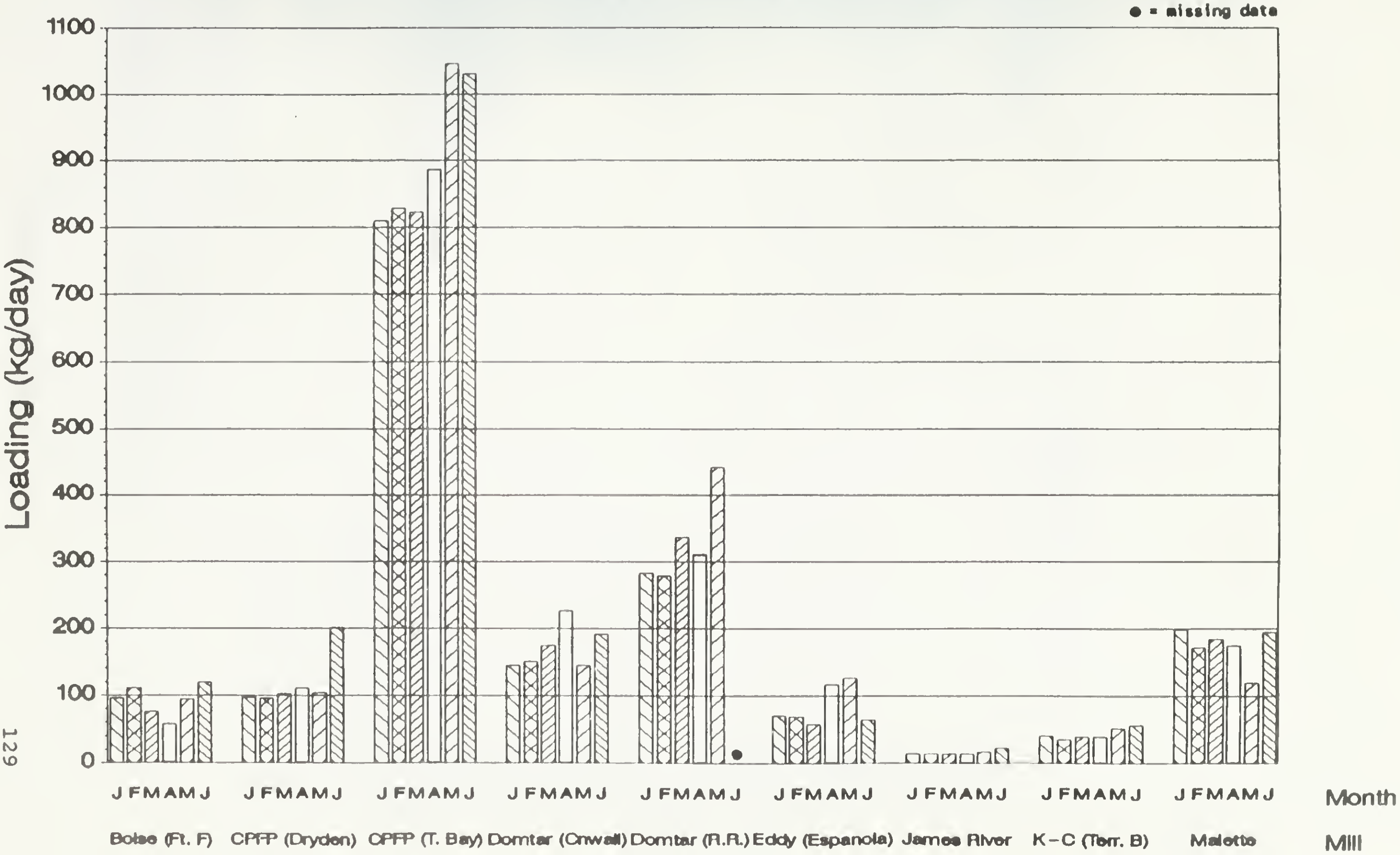


Figure 2.14
Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Aluminum

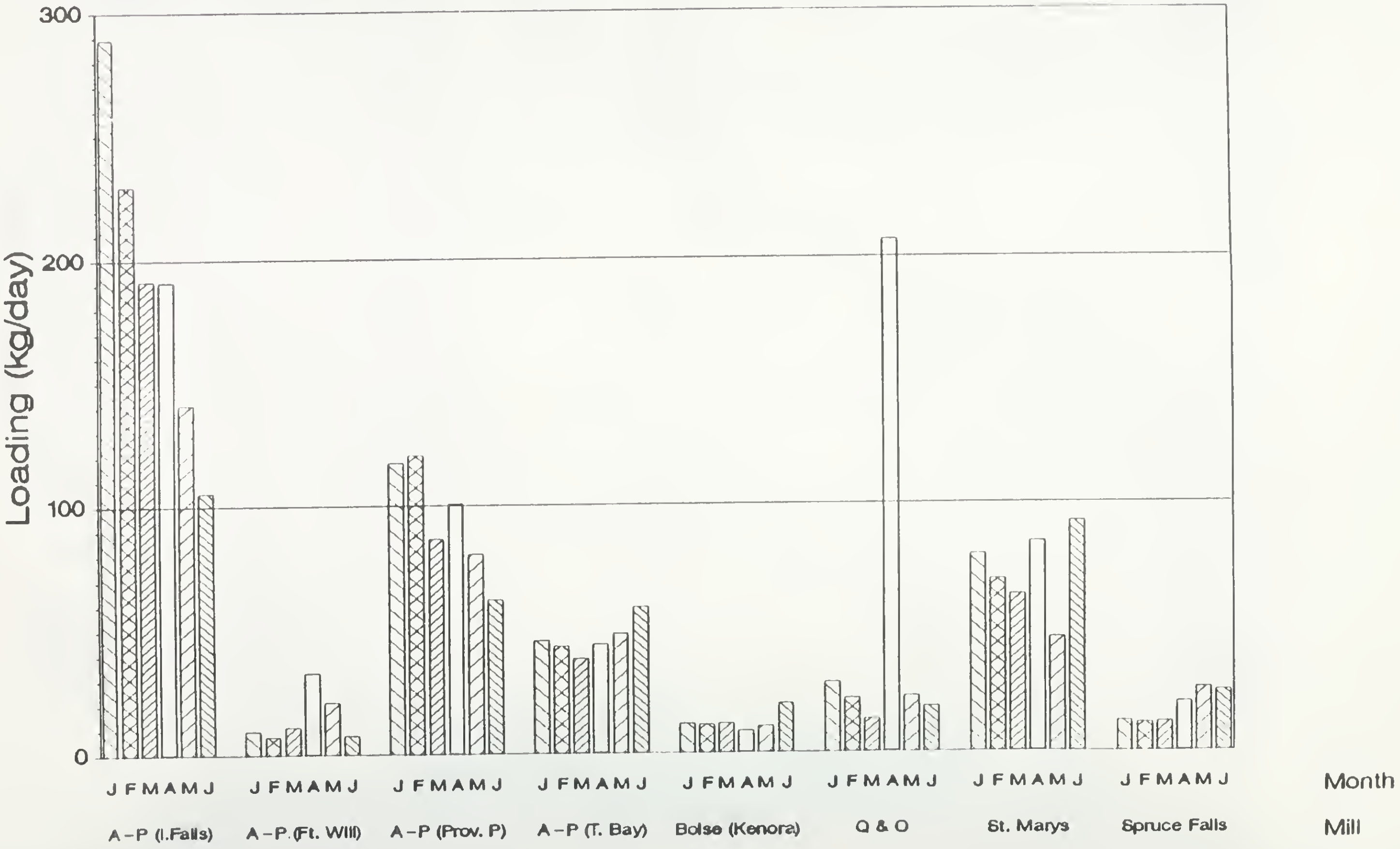


Figure 2.15
Corrugating Mill Process Effluent
Monthly Average Loading of Aluminum

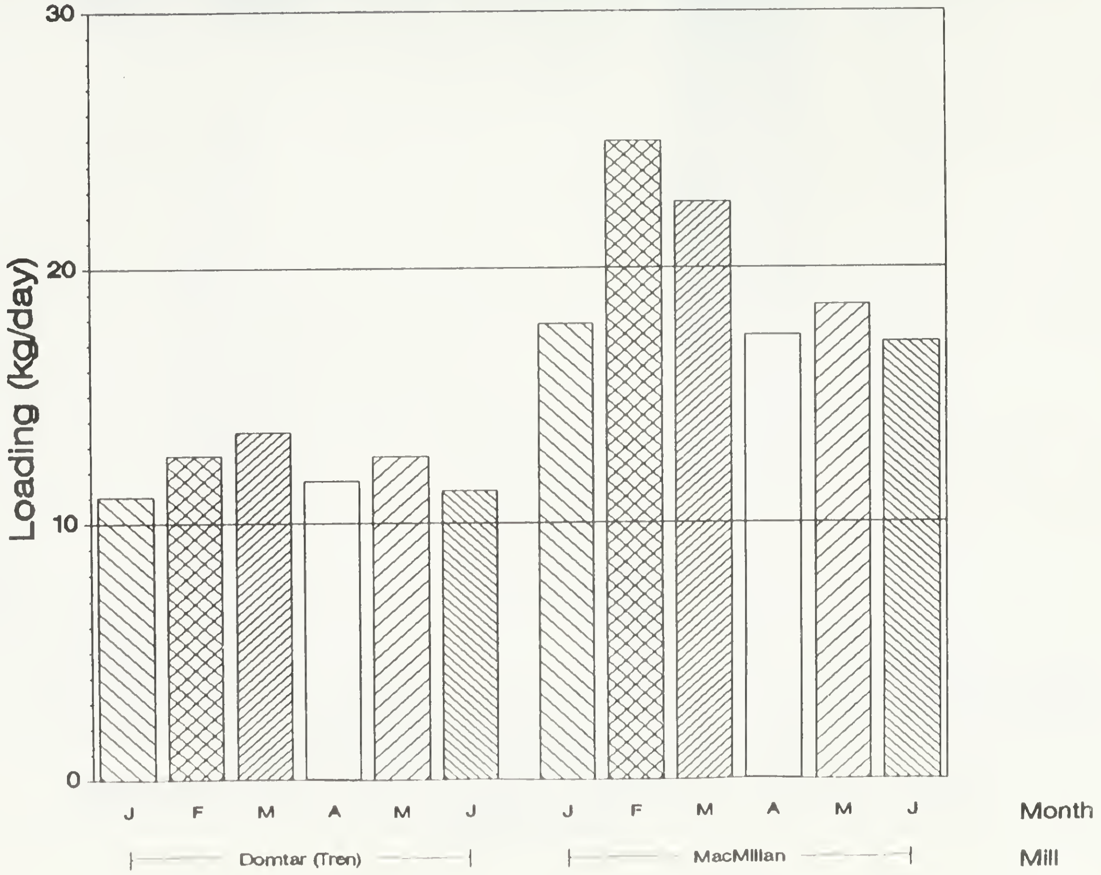


Figure 2.16

Deinking – Board – Fine Papers – Tissue Mill Process Effluent Monthly Average Loading of Aluminum

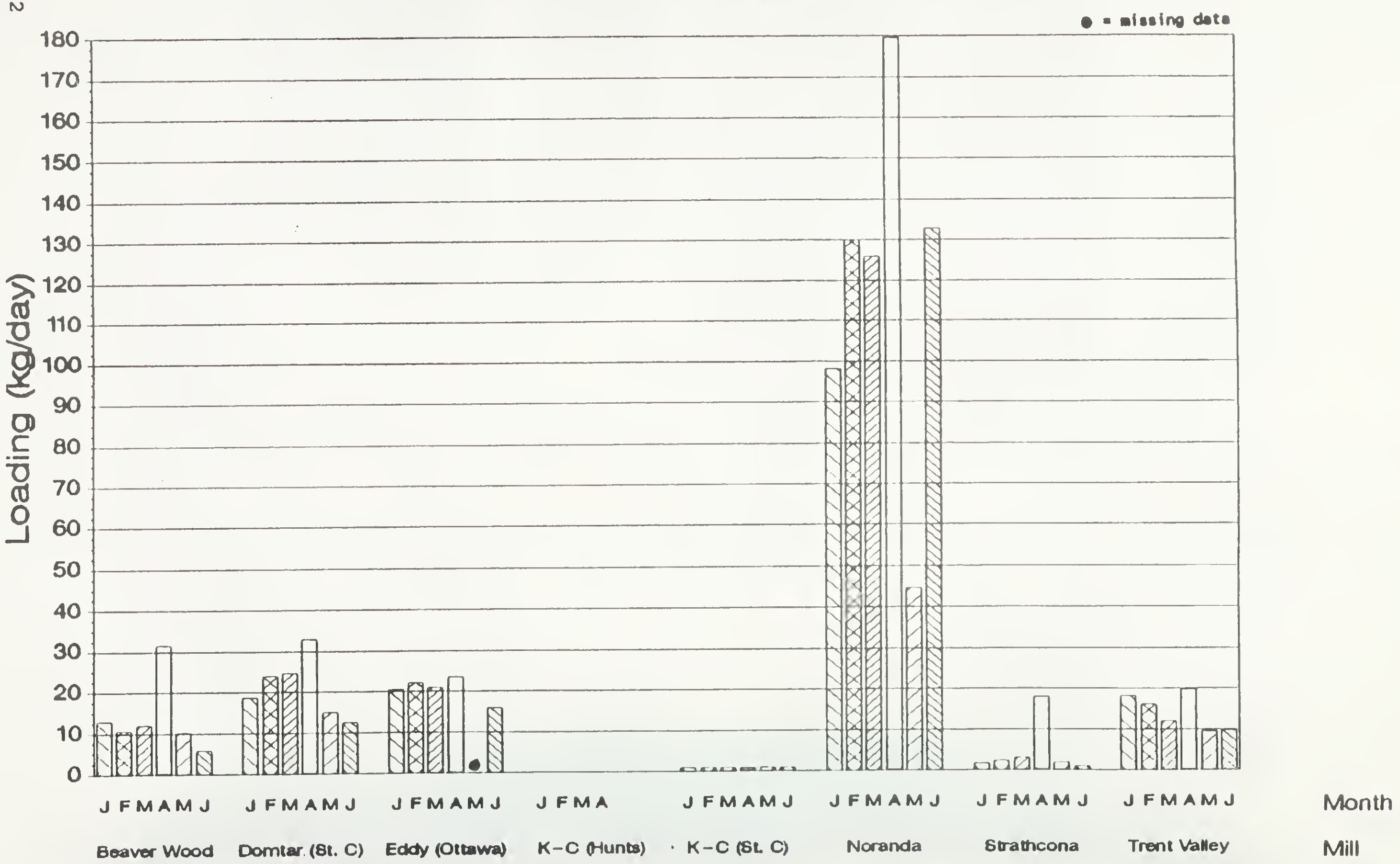


Figure 2.17
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Zinc

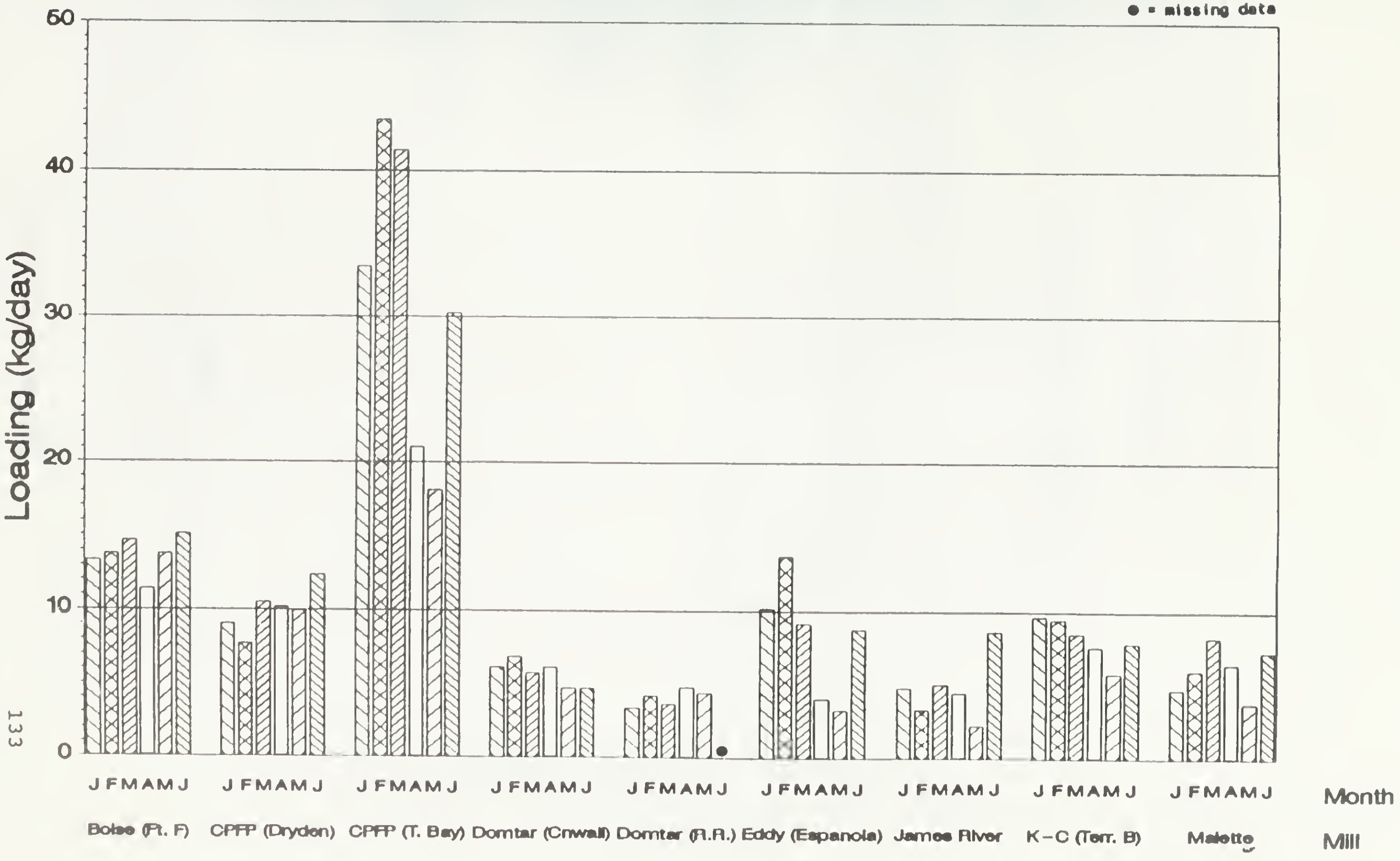


Figure 2.18
Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Zinc

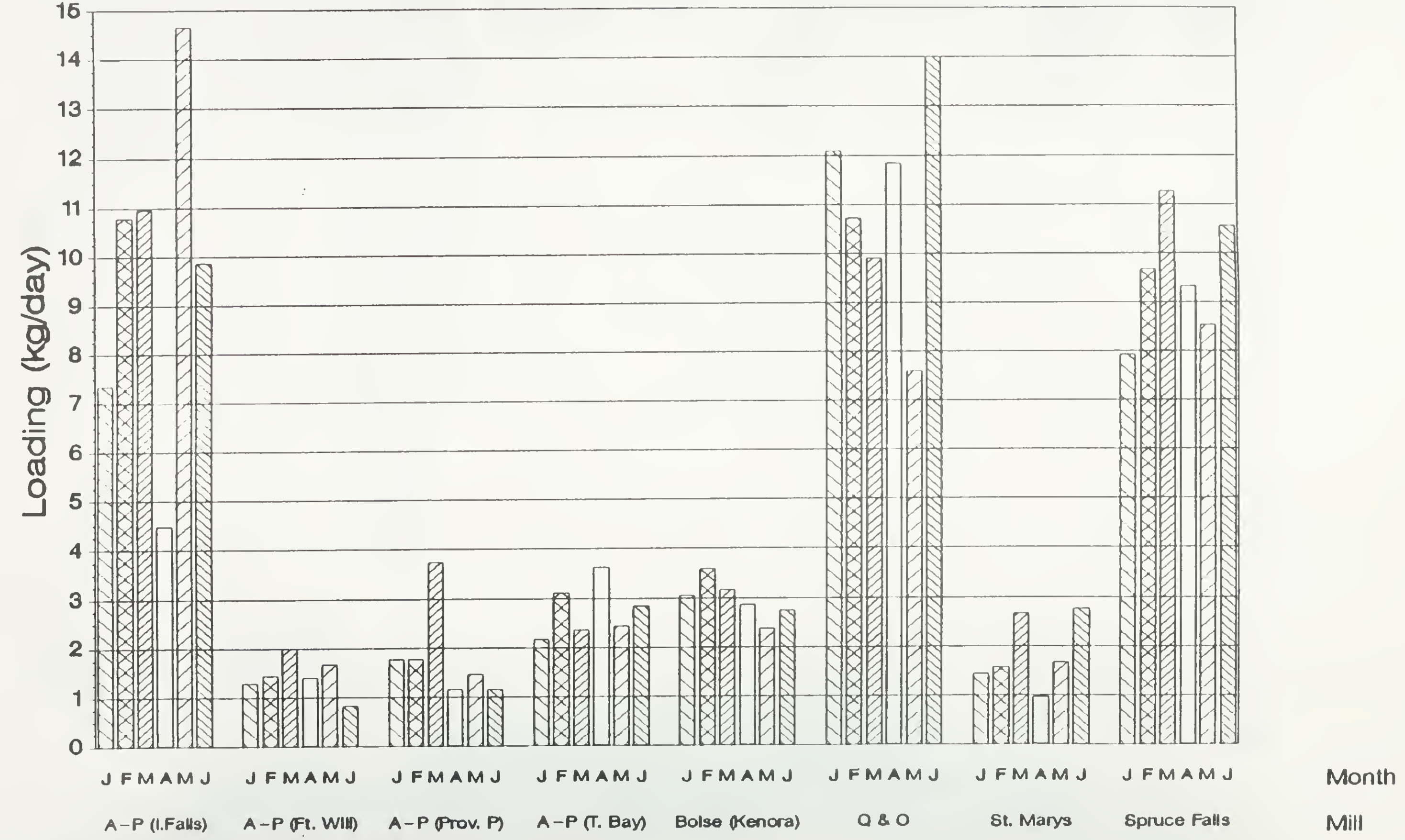


Figure 2.19

Corrugating Mill Process Effluent Monthly Average Loading of Zinc

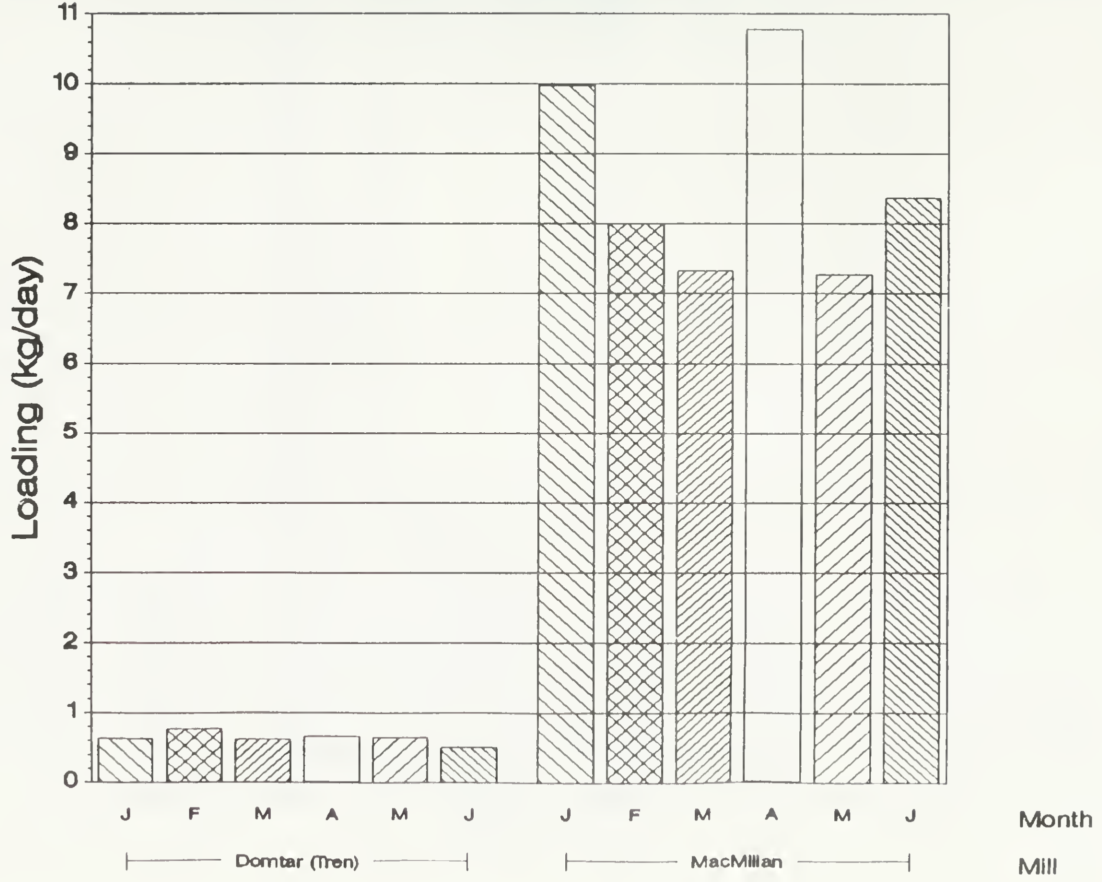


Figure 2.20

Deinking – Board – Fine Papers – Tissue Mill Process Effluent

Monthly Average Loading of Zinc

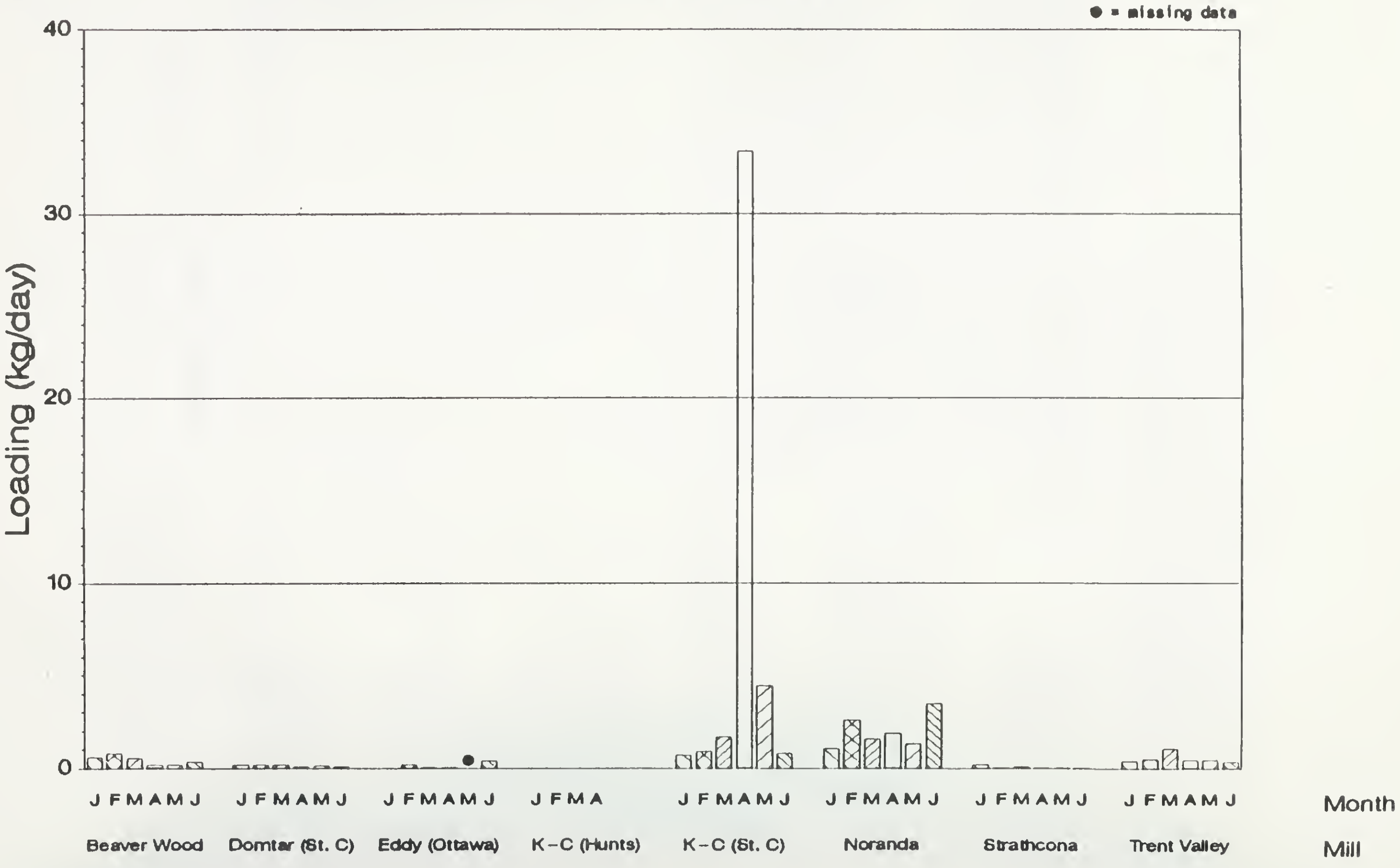


Figure 2.21
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of COD

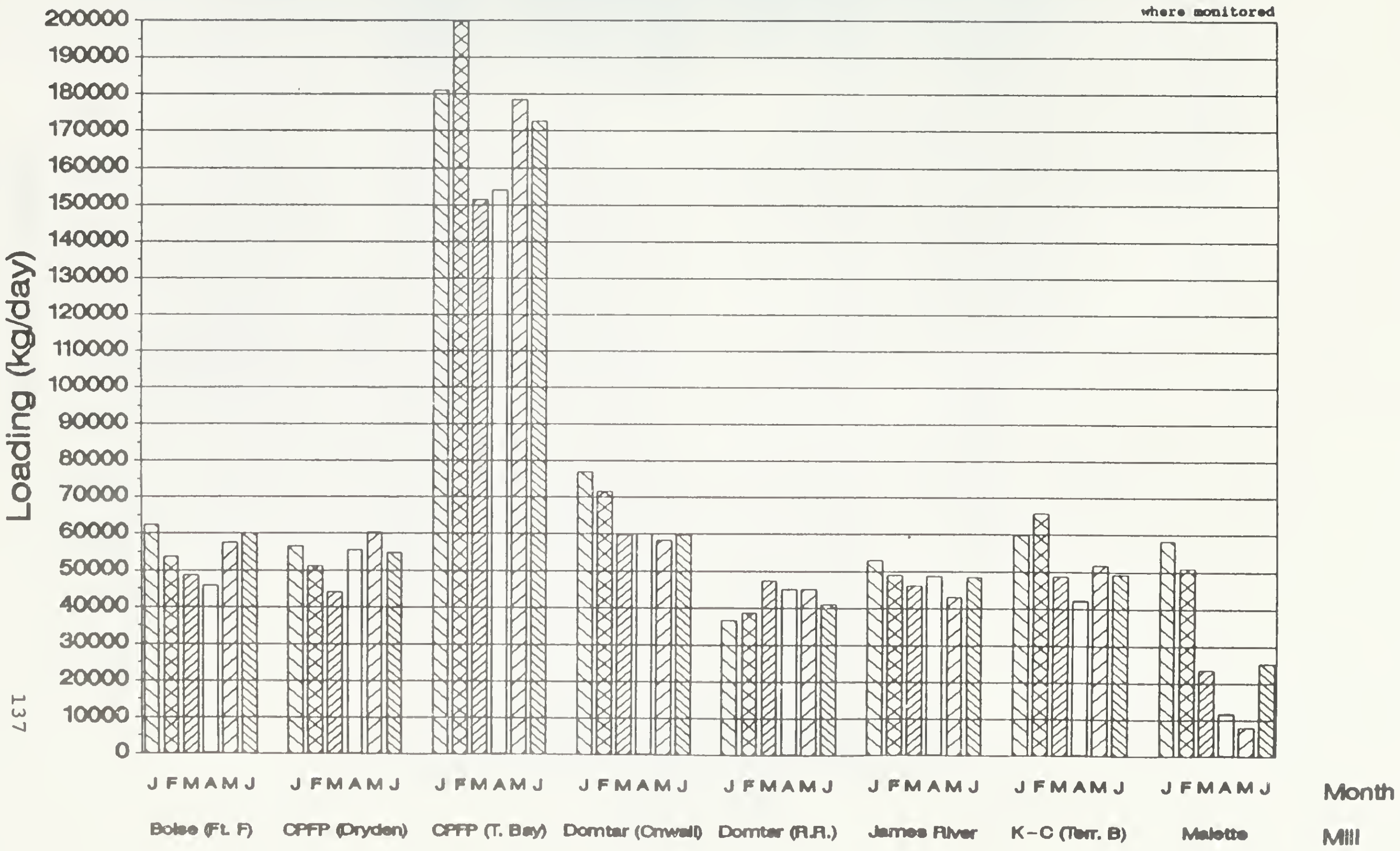


Figure 2.22
Sulphite-Mechanical Mill Process Effluent
Monthly Average Loading of COD

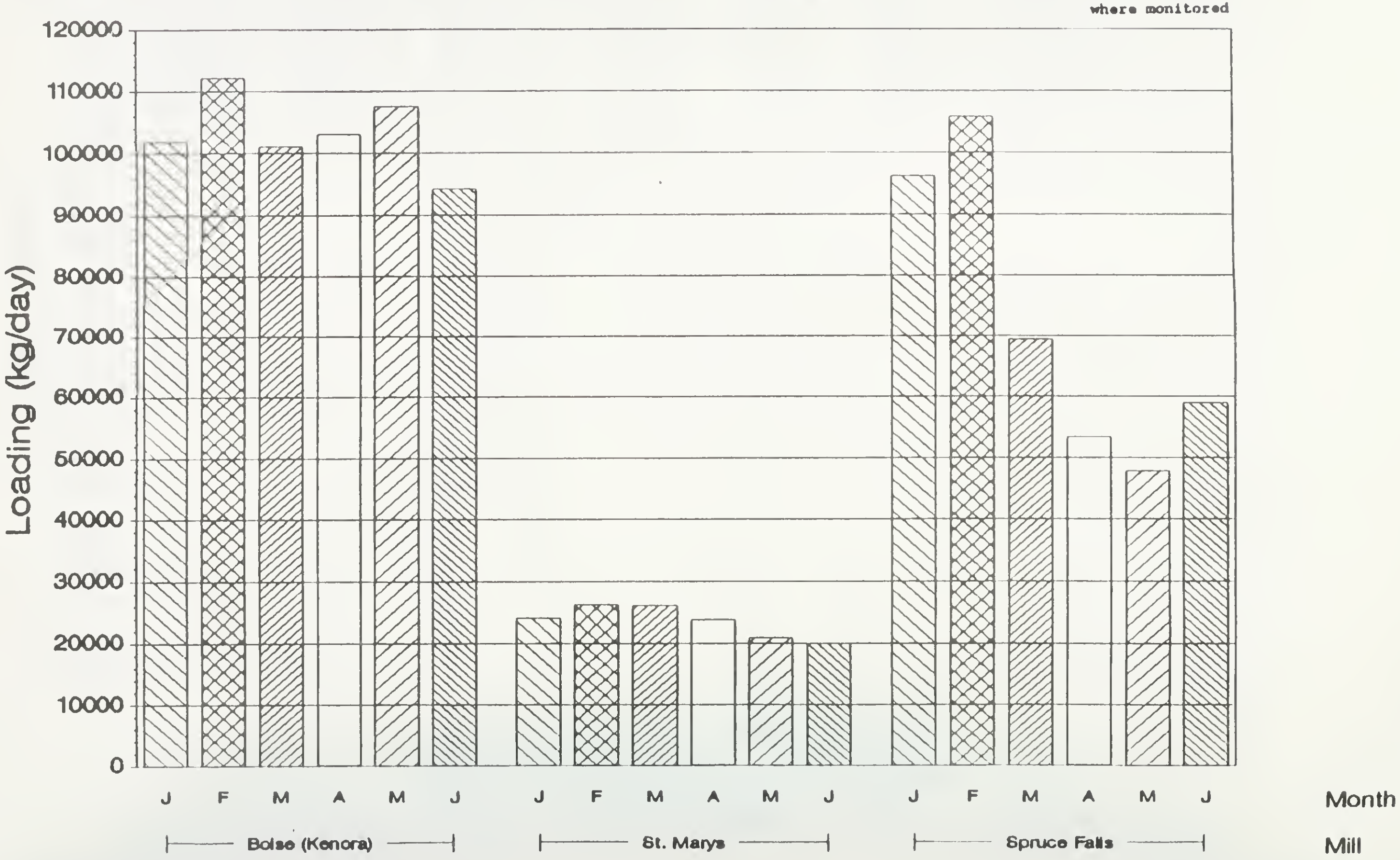


Figure 2.23
Corrugating Mill Process Effluent
Monthly Average Loading of COD

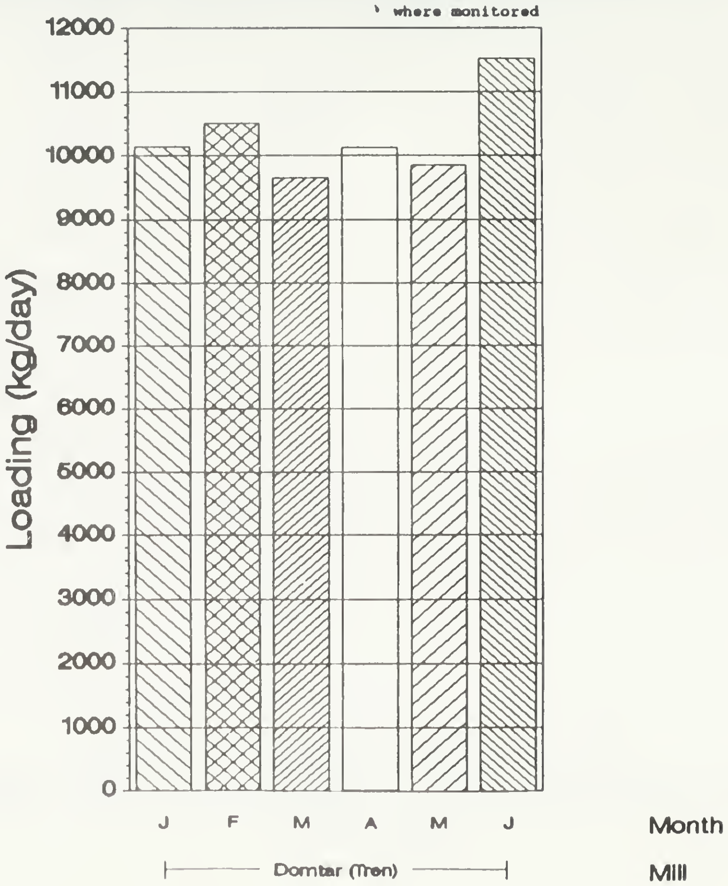


Figure 2.24
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of COD

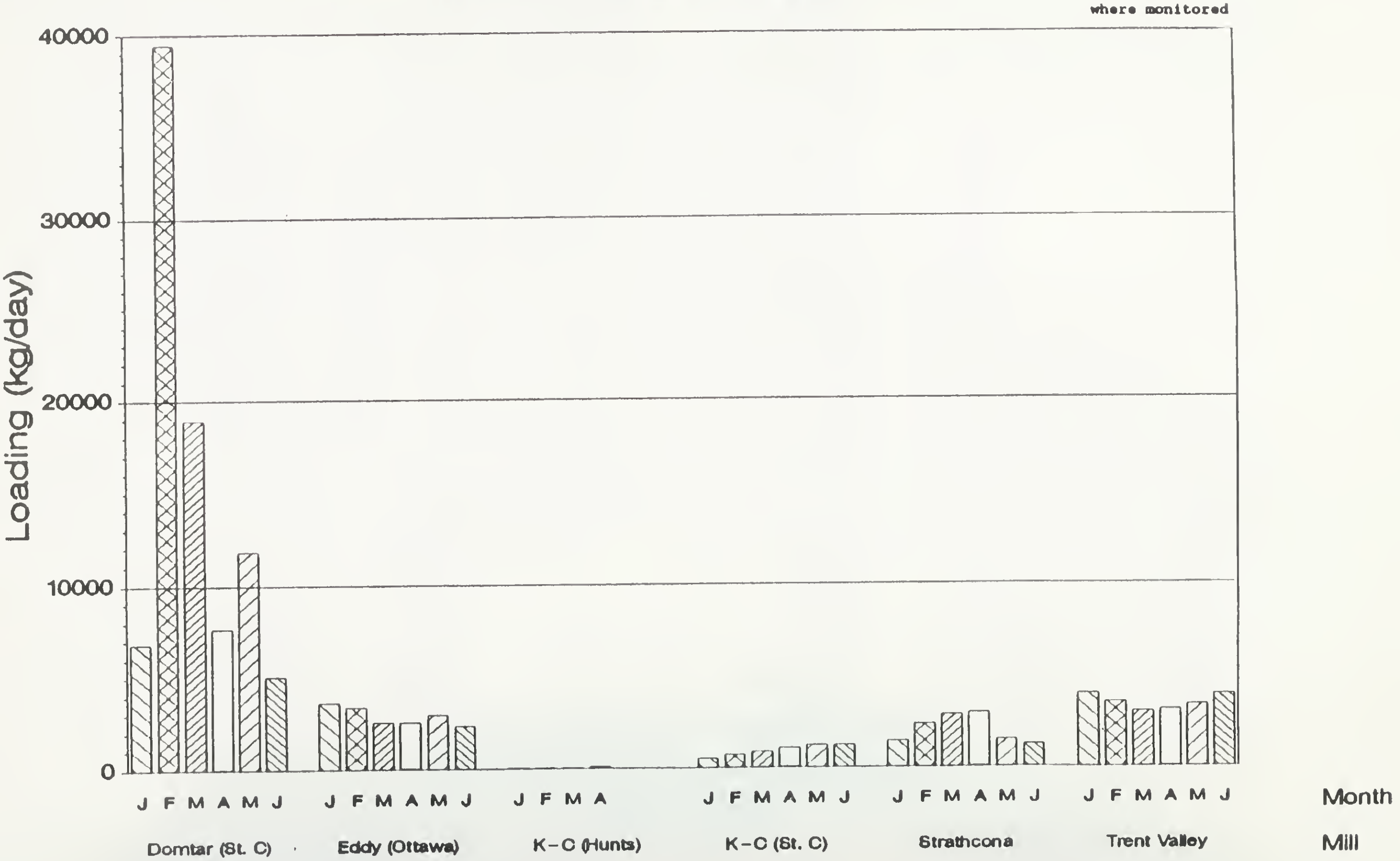


Figure 2.25
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of DOC

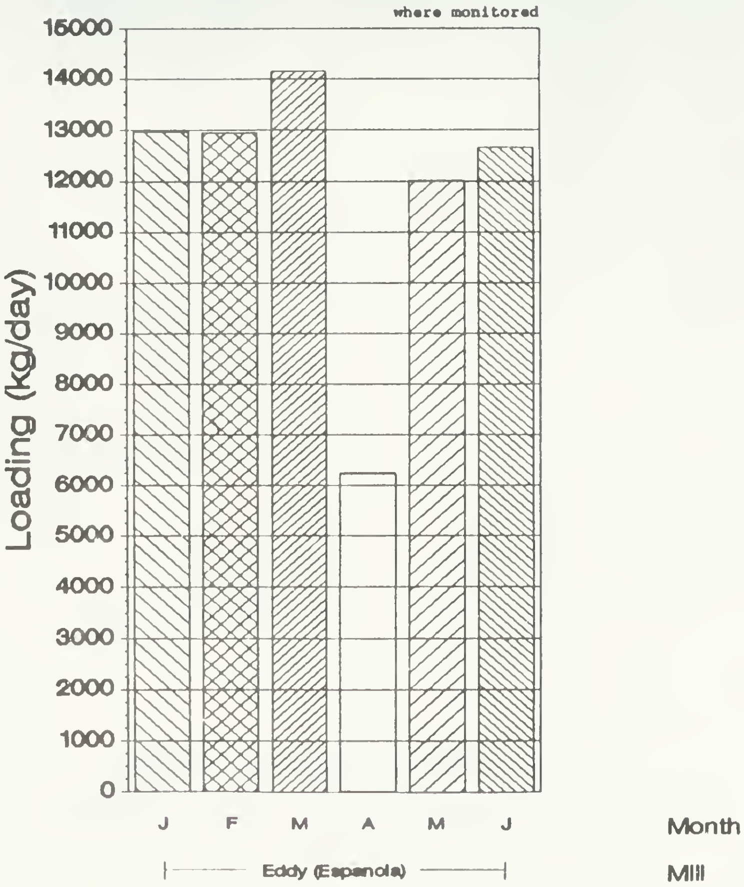


Figure 2.26
Sulphite-Mechanical Mill Process Effluent
Monthly Average Loading of DOC

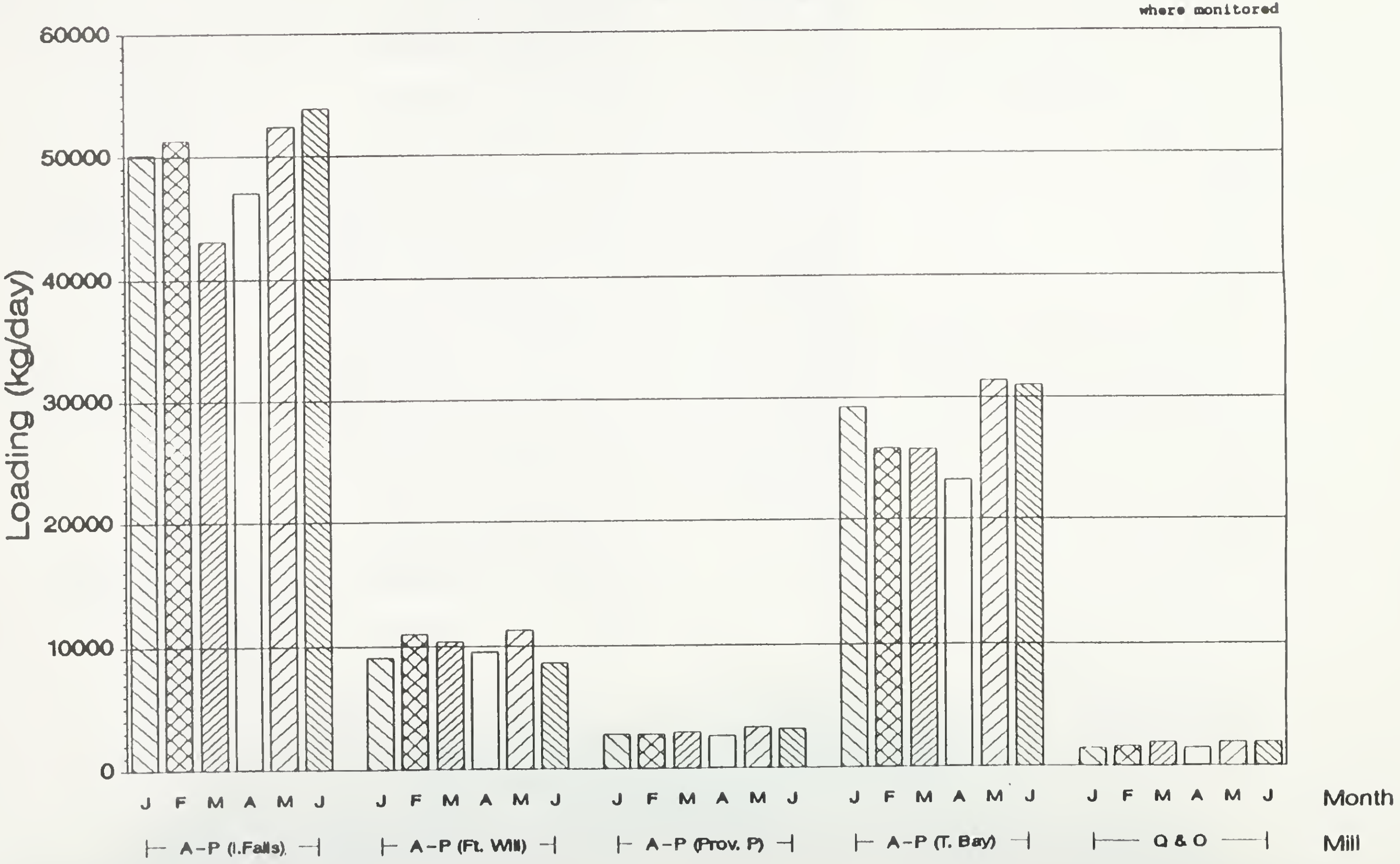


Figure 2.27
Corrugating Mill Process Effluent
Monthly Average Loading of DOC

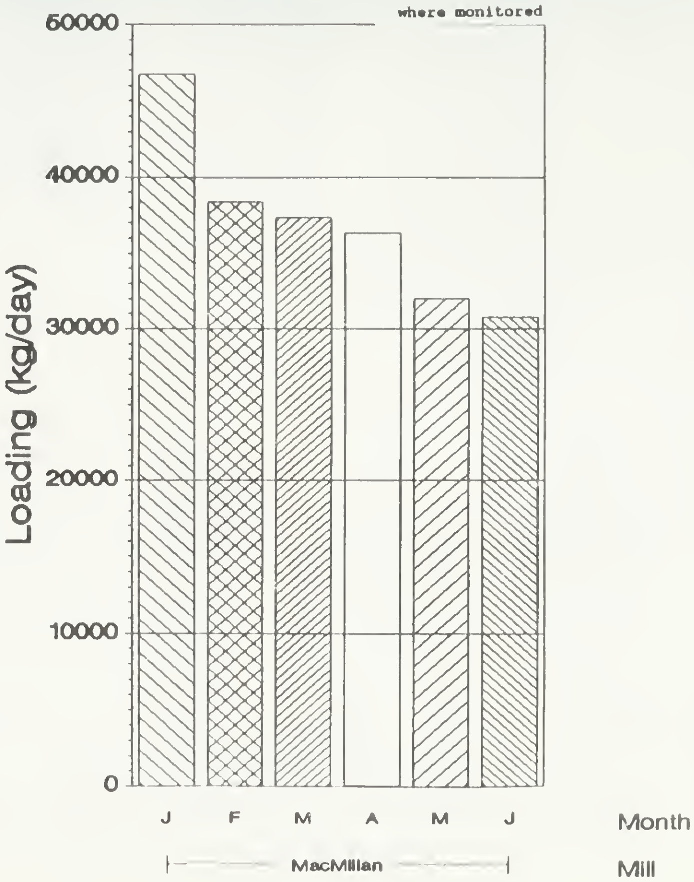


Figure 2.28

Deinking – Board – Fine Papers – Tissue Mill Process Effluent

Monthly Average Loading of DOC

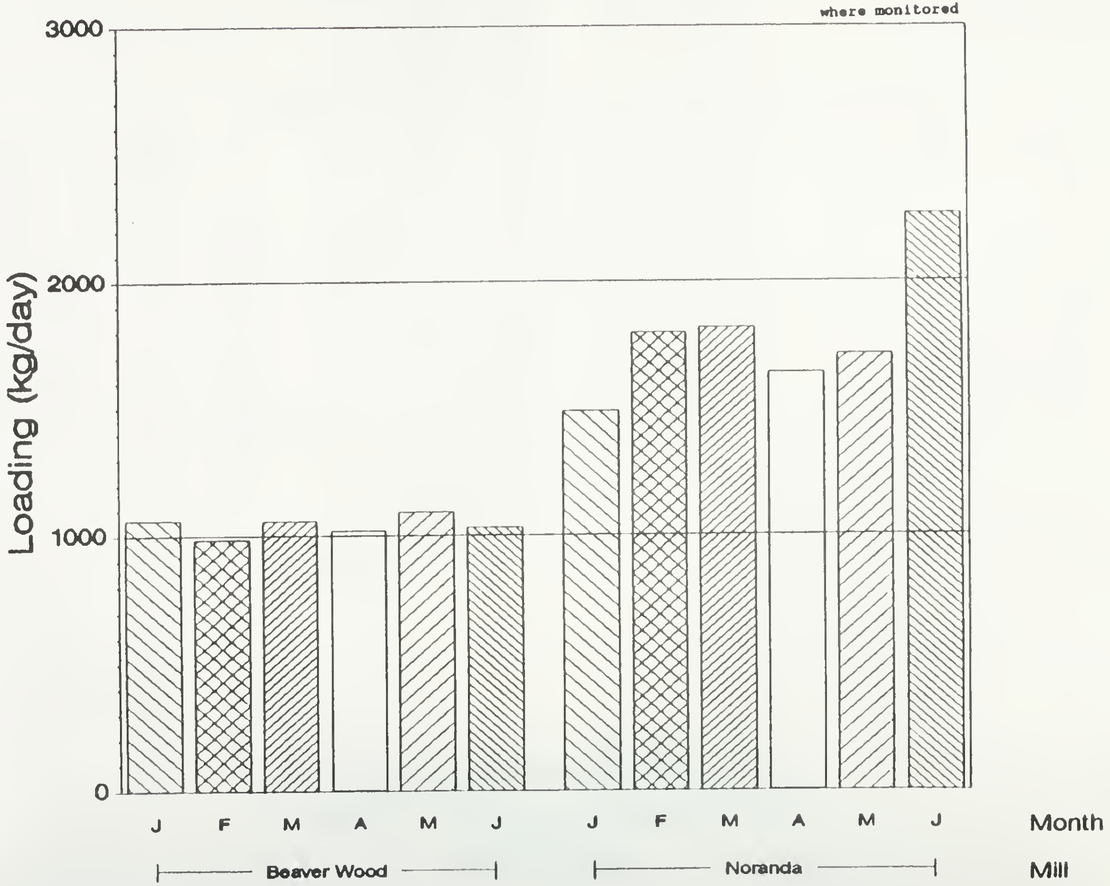


Figure 2.29
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Ammonia plus Ammonium

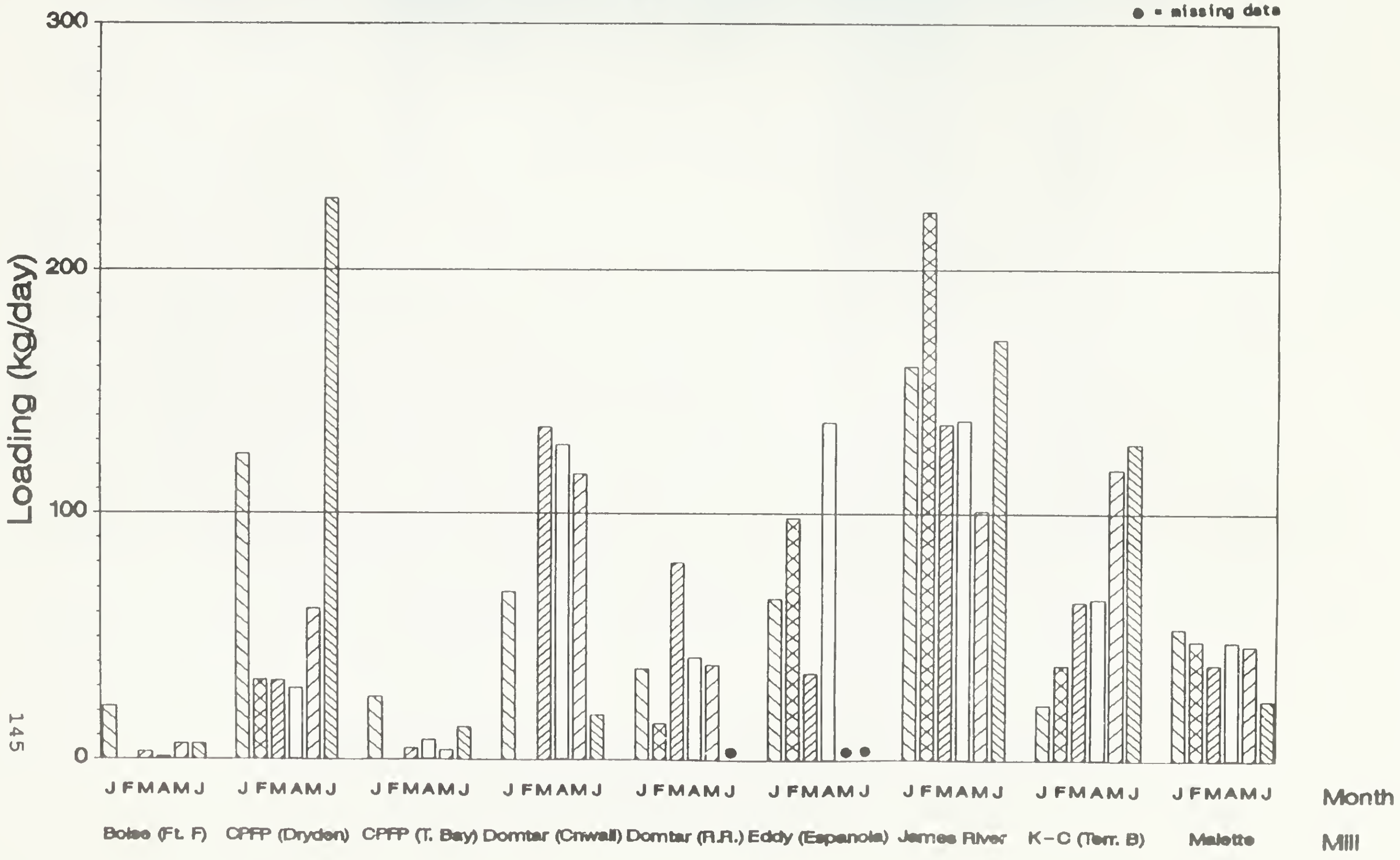


Figure 2.30
Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Ammonia plus Ammonium

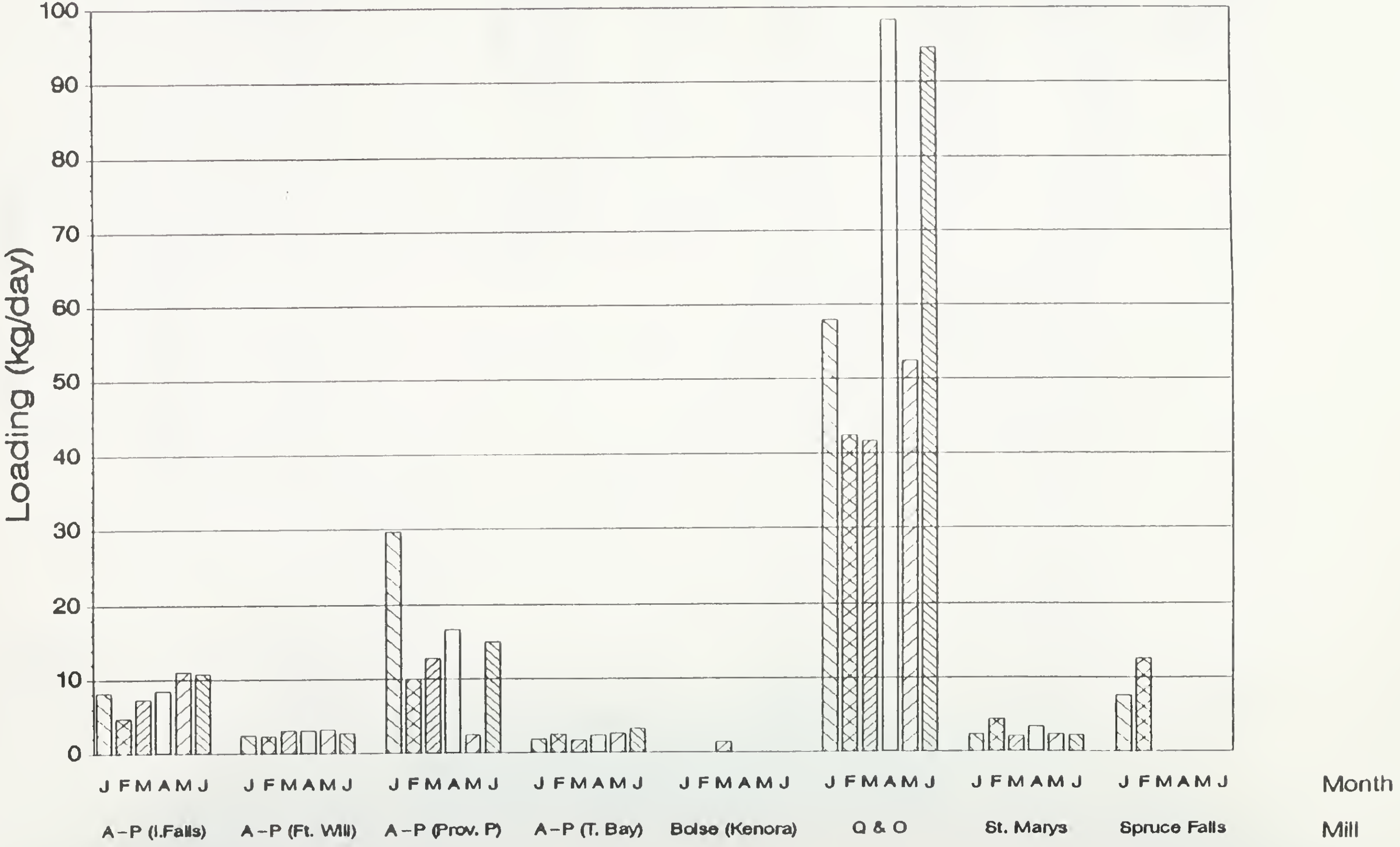


Figure 2.31
Corrugating Mill Process Effluent
Monthly Average Loading of Ammonia plus Ammonium

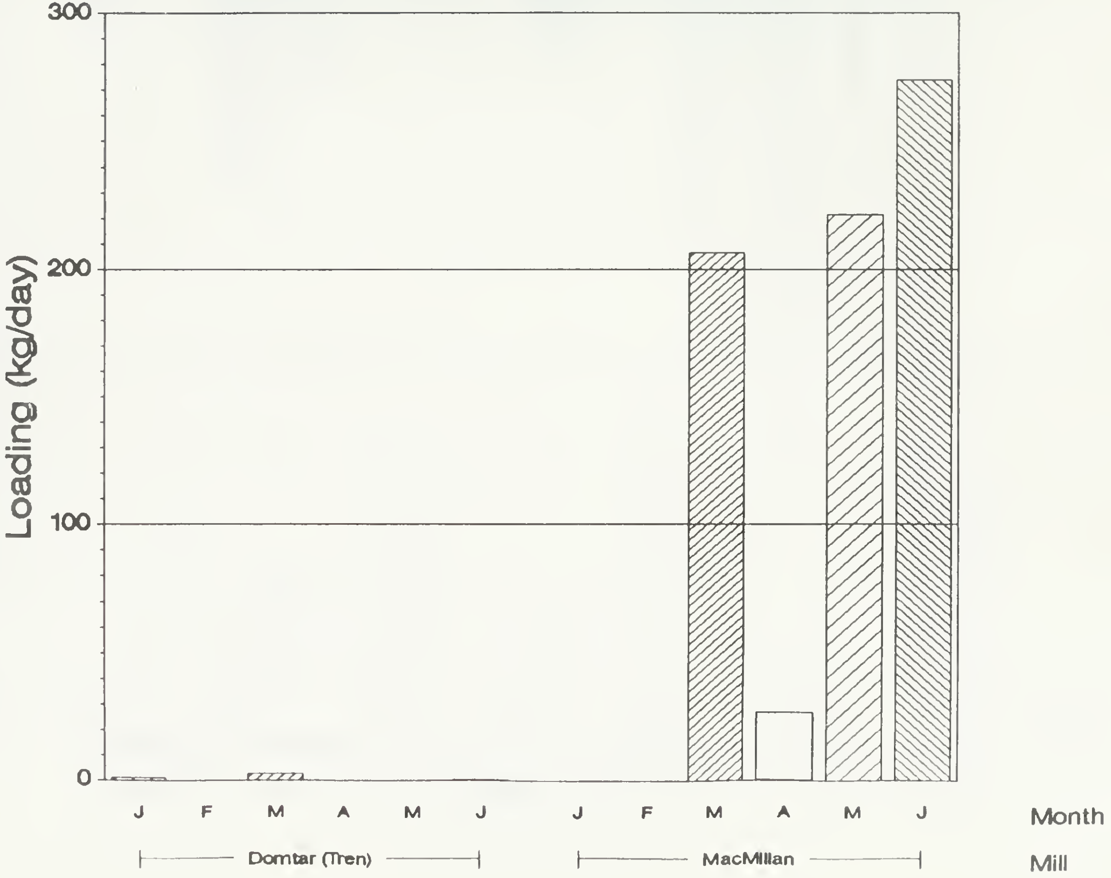


Figure 2.32

Deinking – Board – Fine Papers – Tissue Mill Process Effluent

Monthly Average Loading of Ammonia plus Ammonium

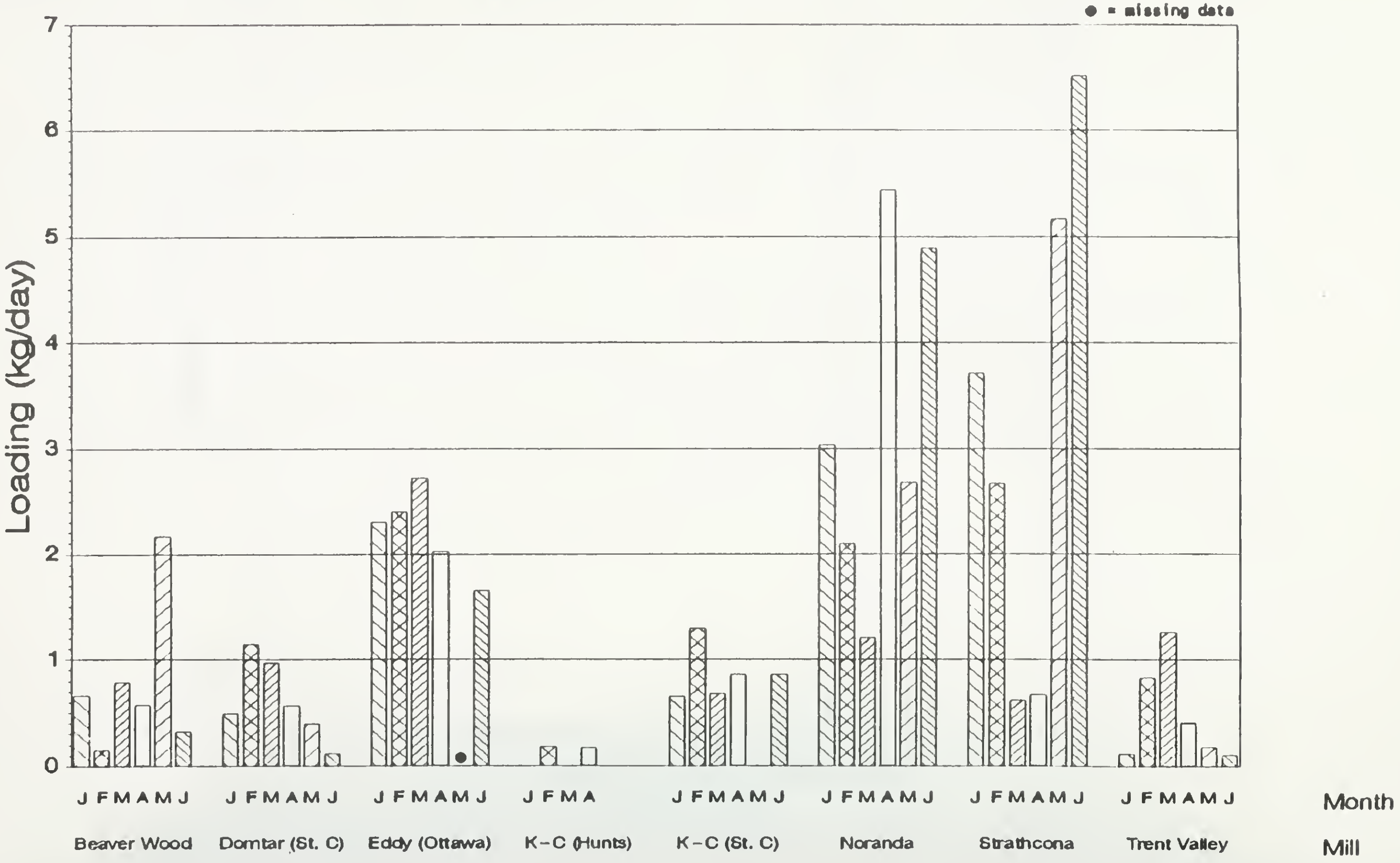


Figure 2.33

Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Total Kjeldahl Nitrogen

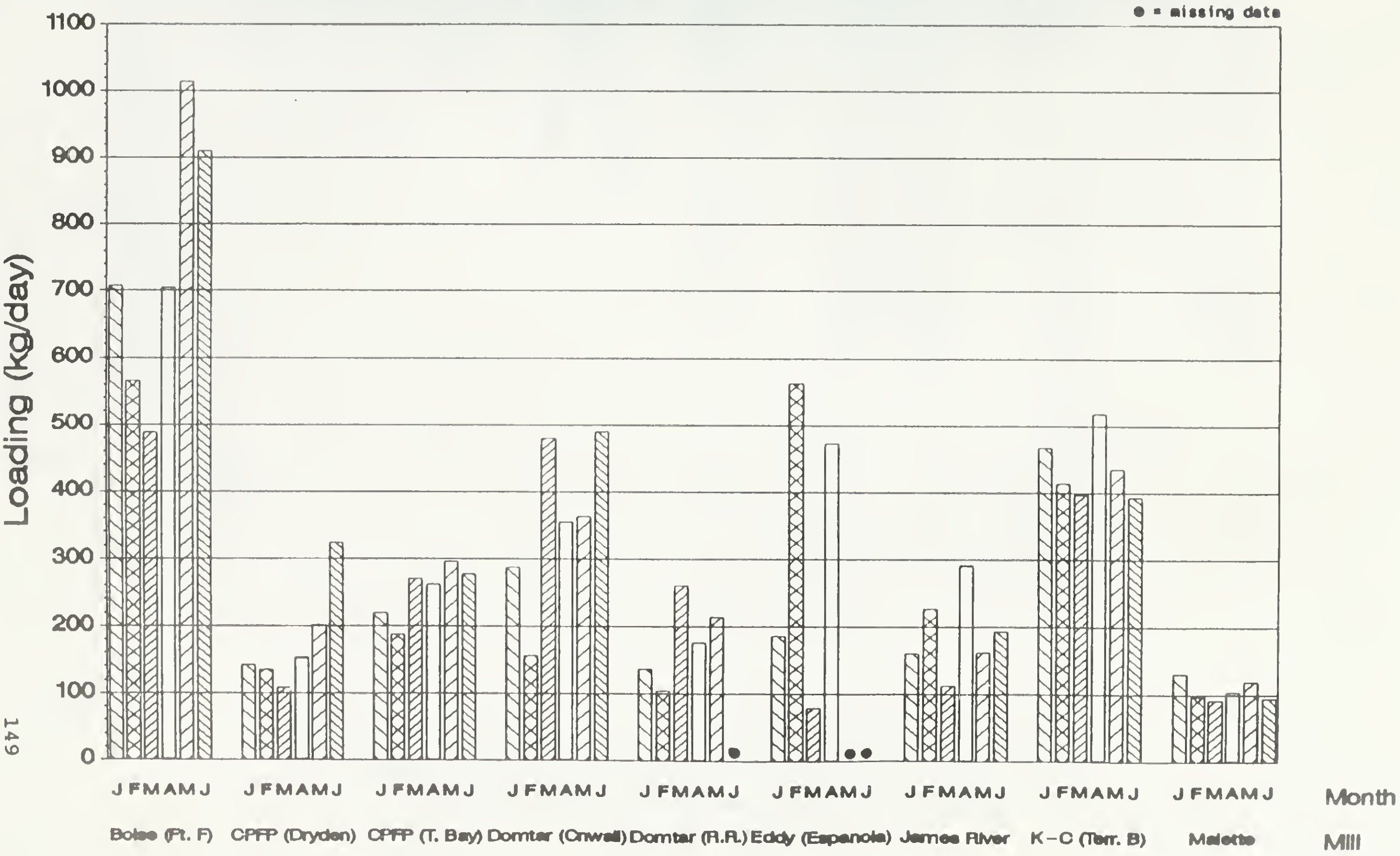


Figure 2.34

Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Total Kjeldahl Nitrogen

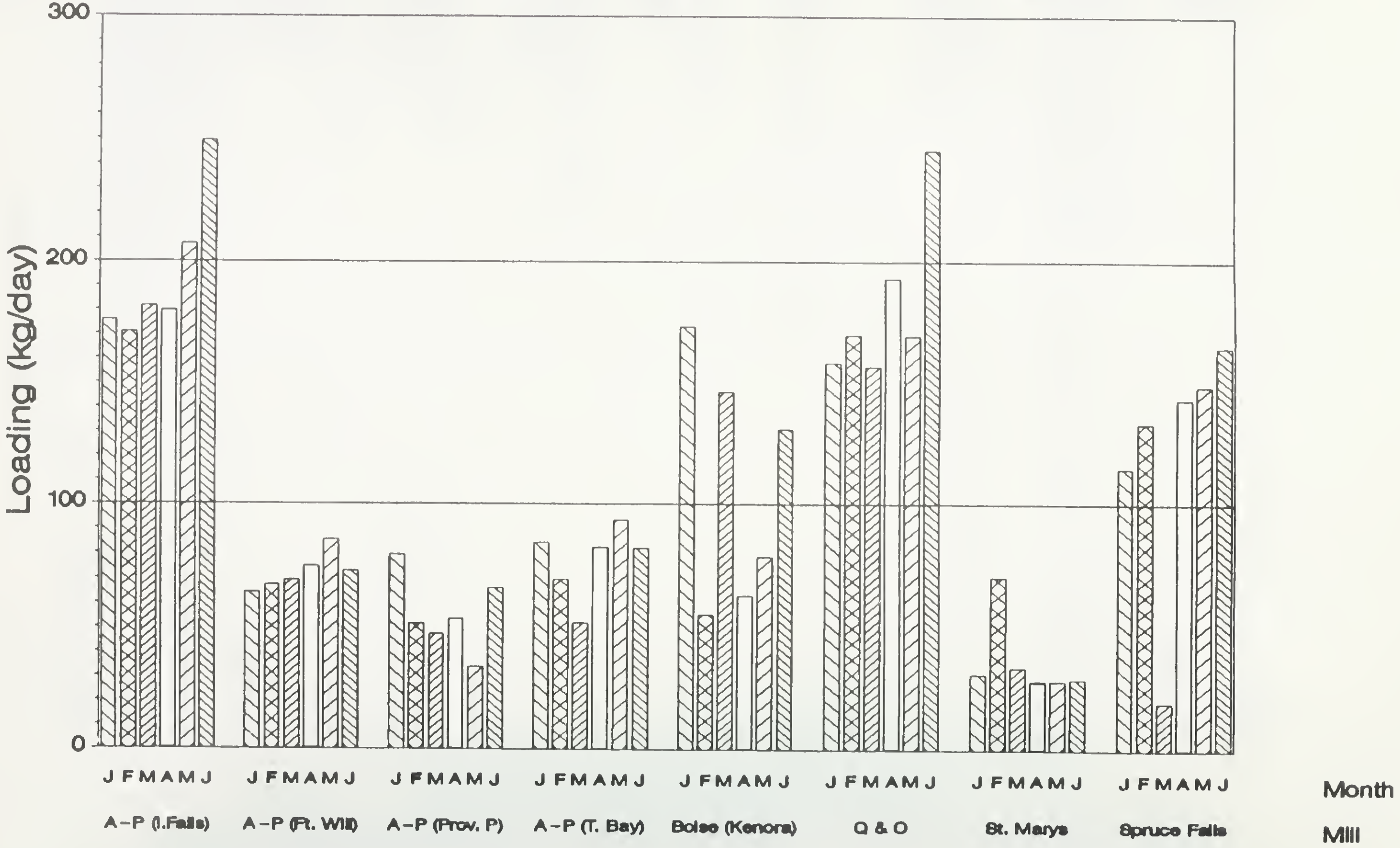


Figure 2.35
Corrugating Mill Process Effluent
Monthly Average Loading of Total Kjeldahl Nitrogen

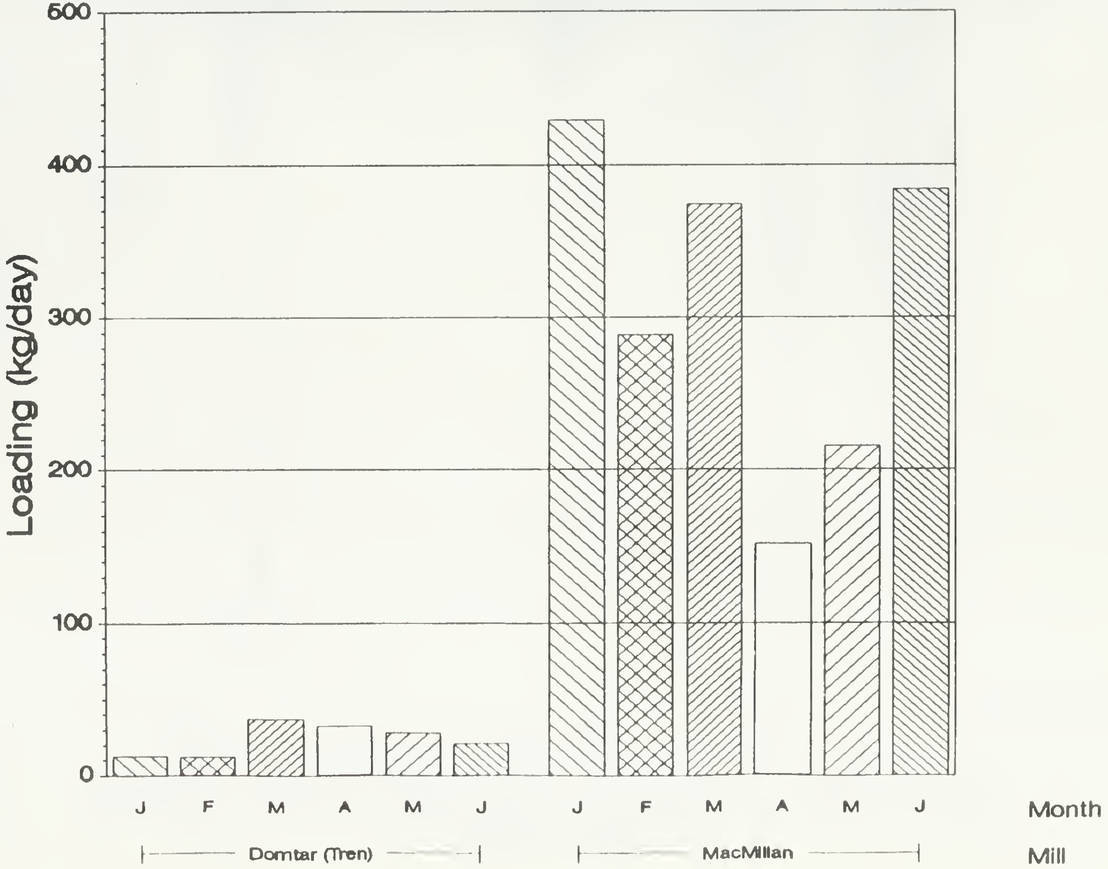


Figure 2.36
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of Total Kjeldahl Nitrogen

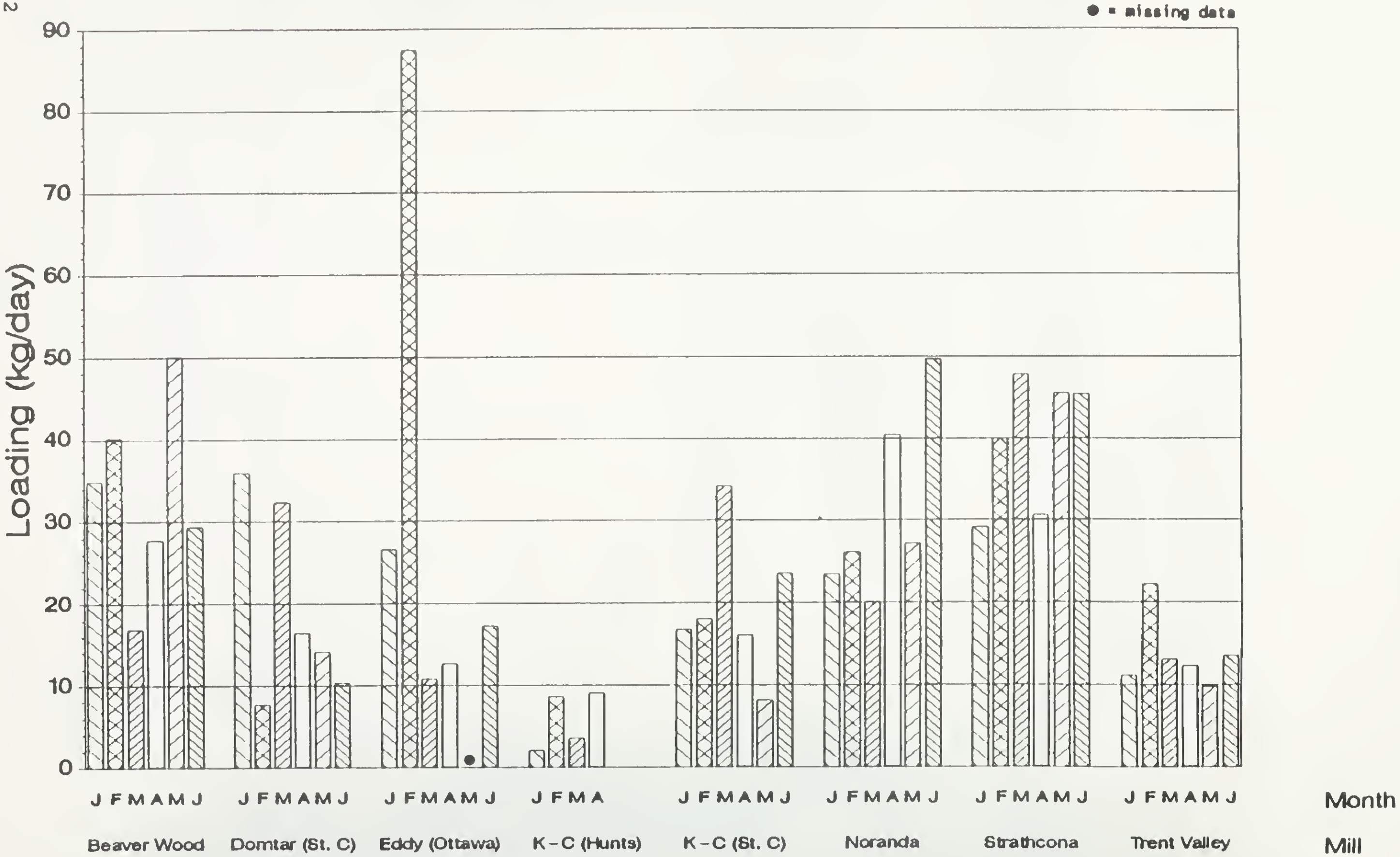


Figure 2.37
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Nitrate and Nitrite

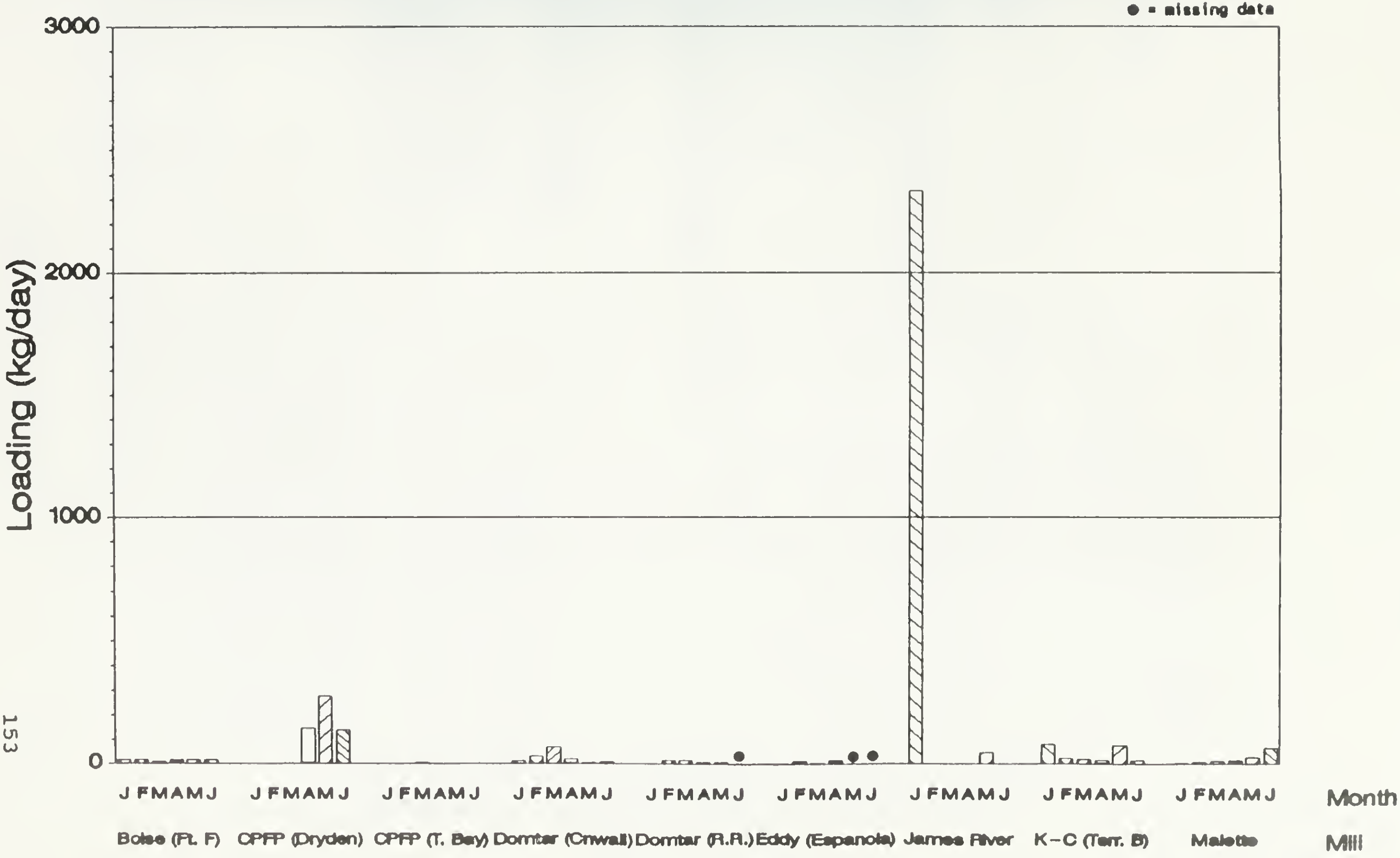


Figure 2.38
Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Nitrate and Nitrite

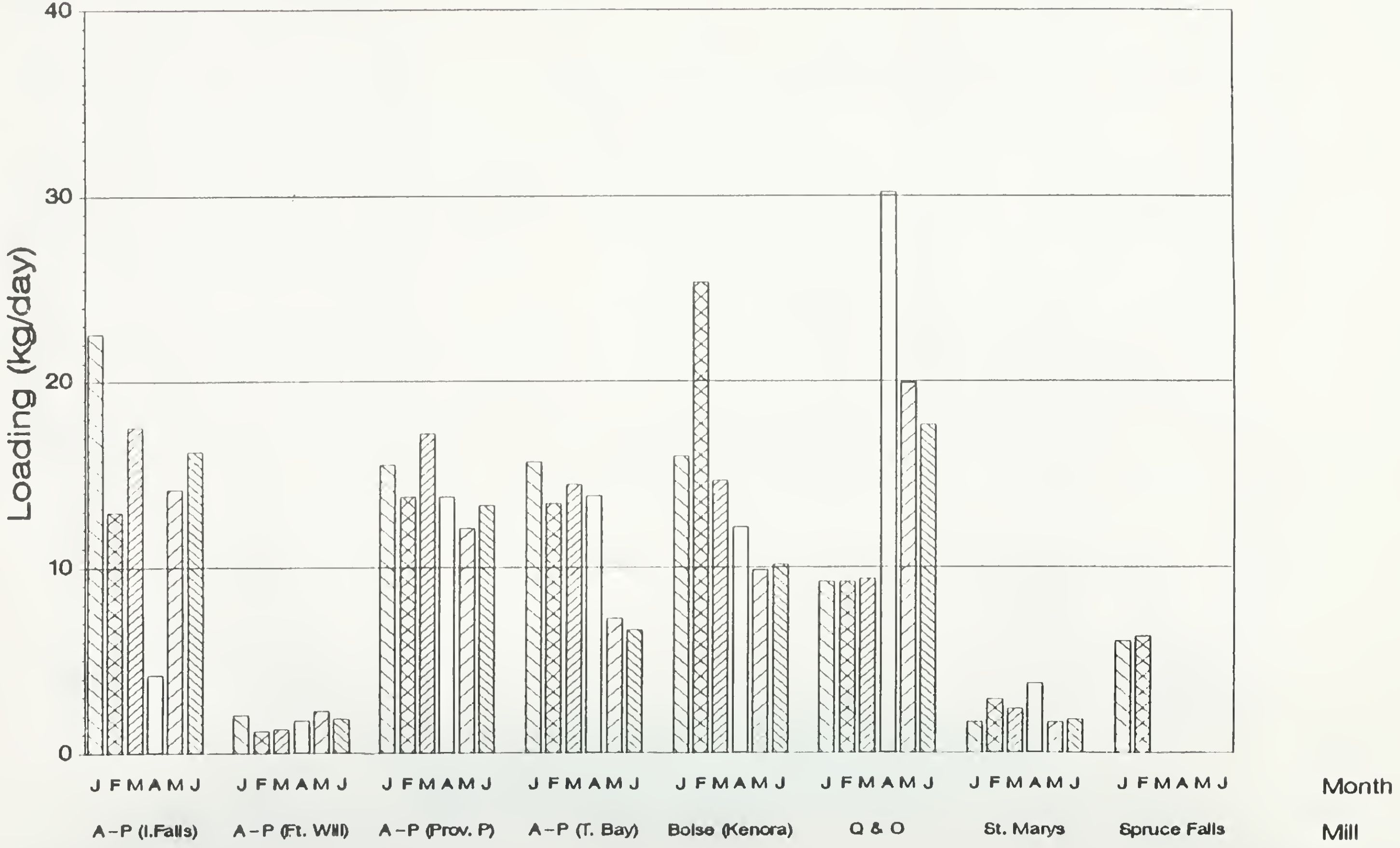


Figure 2.39

Corrugating Mill Process Effluent

Monthly Average Loading of Nitrate and Nitrite

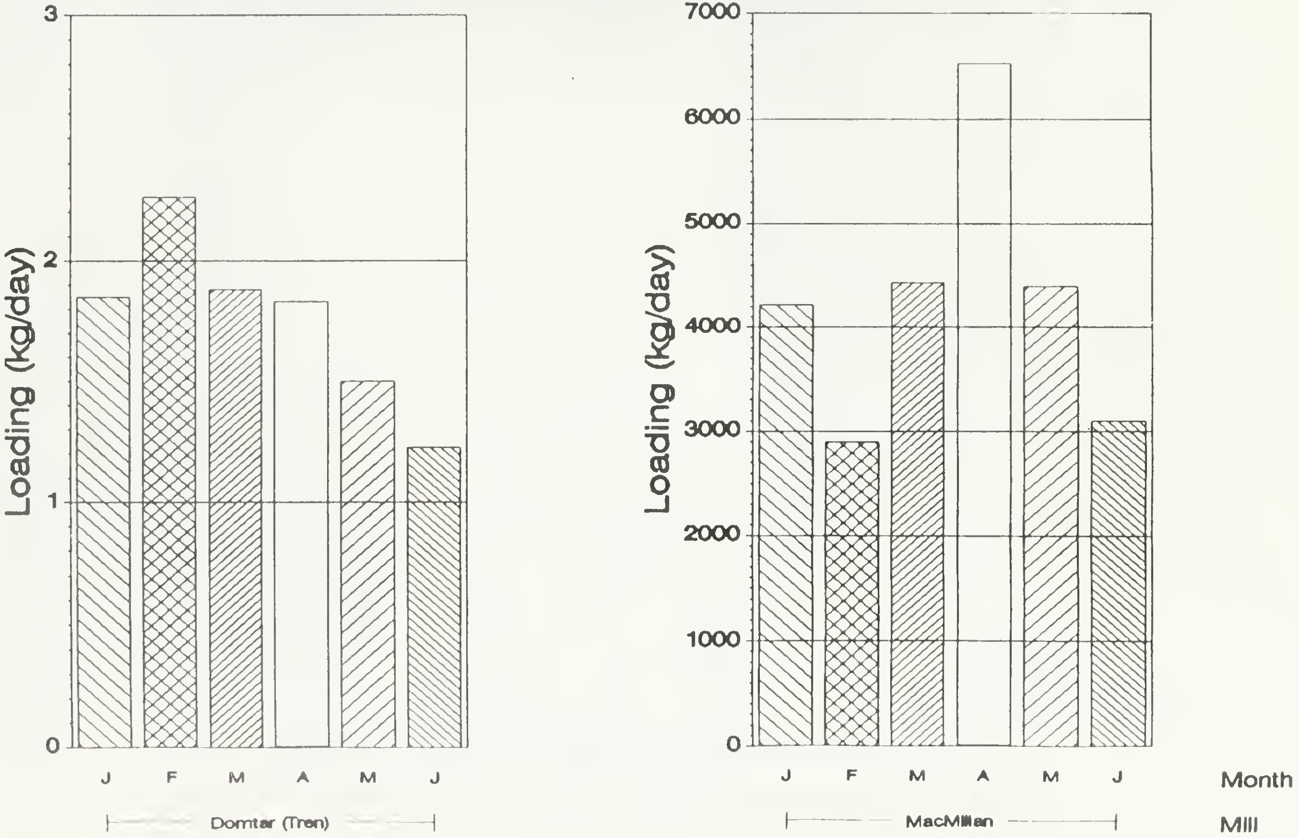


Figure 2.40
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of Nitrate and Nitrite

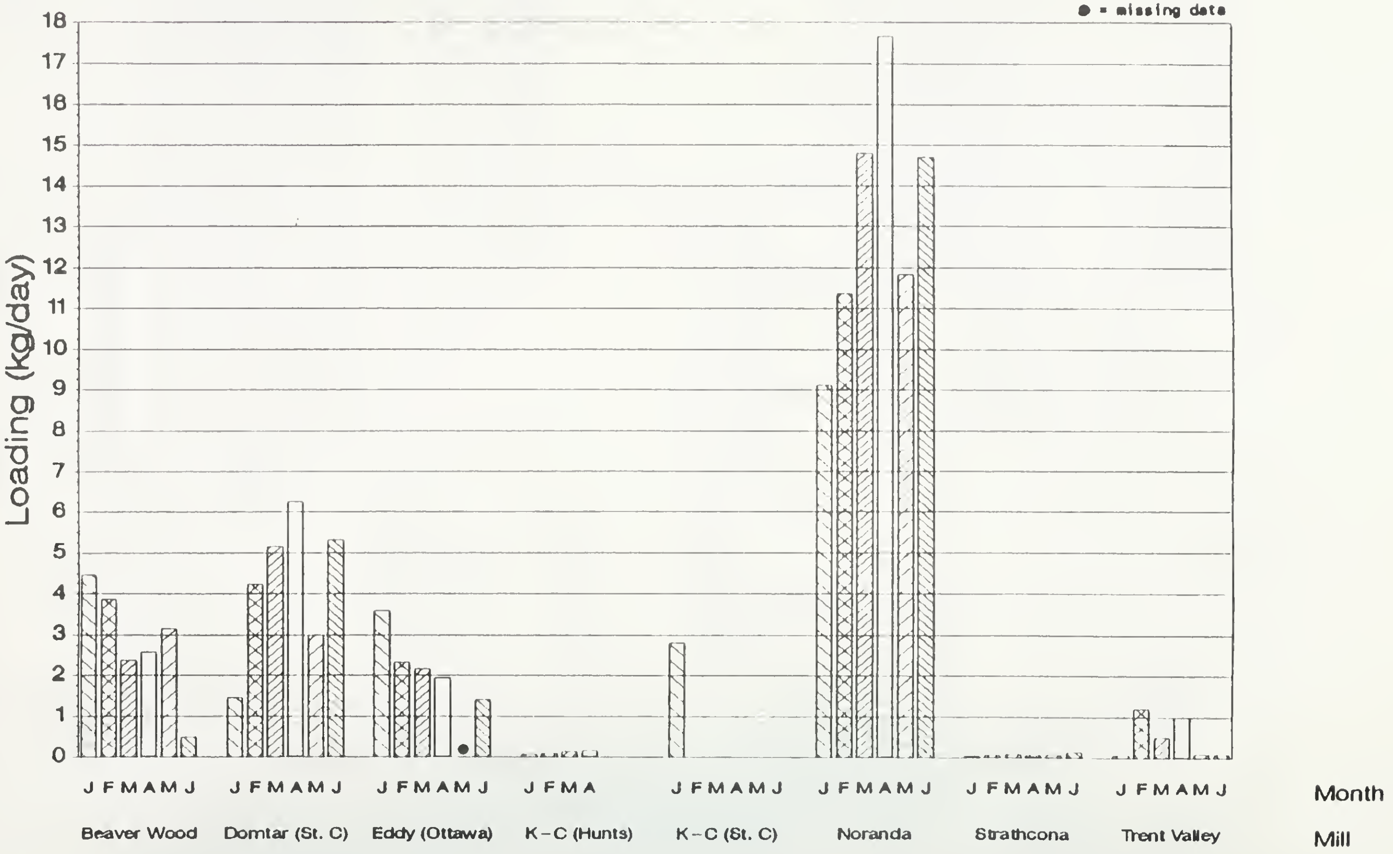


Figure 2.41
Sulphate (Kraft) Mill Process Effluent
Monthly Average Loading of Phosphorus

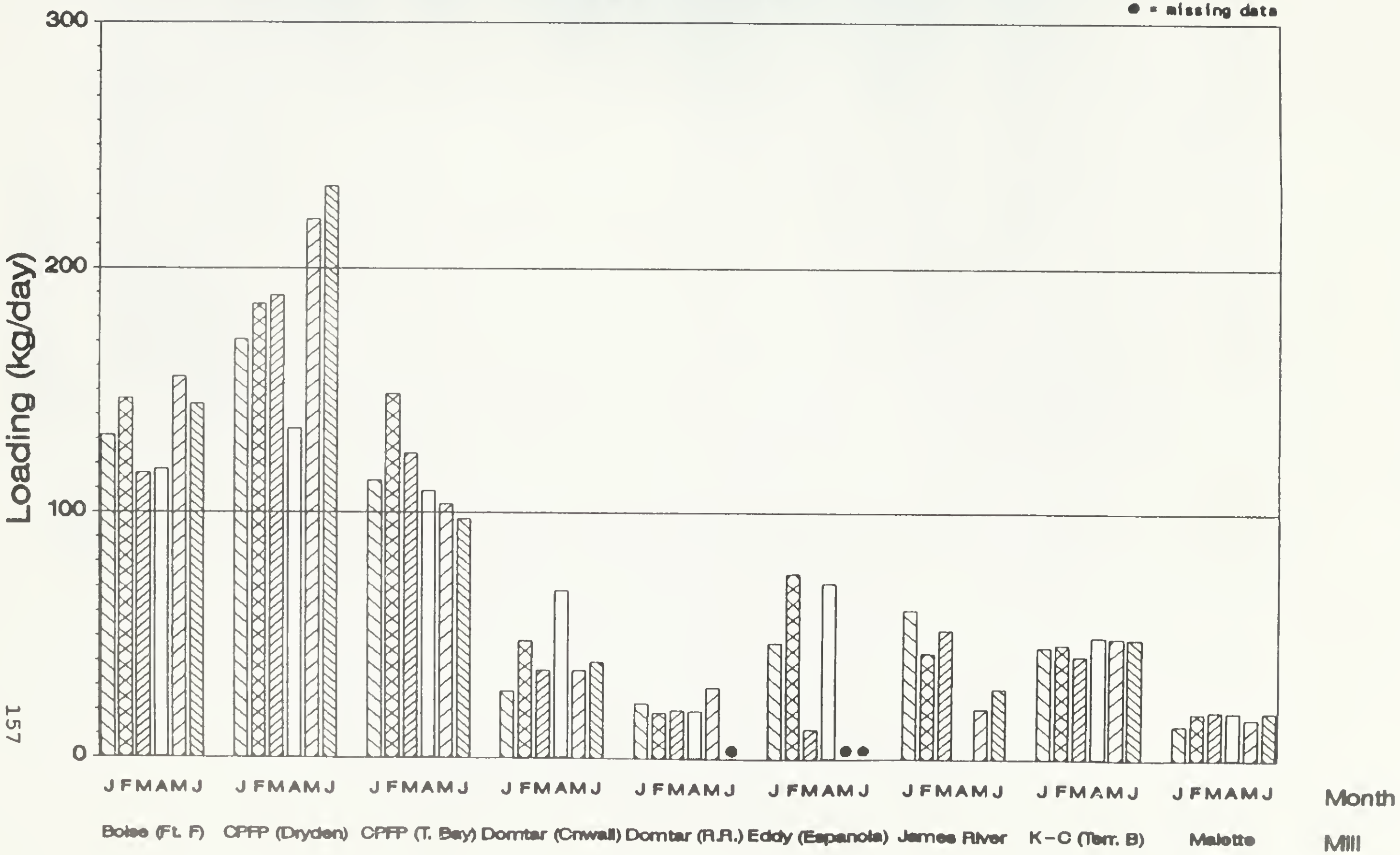


Figure 2.42
Sulphite – Mechanical Mill Process Effluent
Monthly Average Loading of Phosphorus

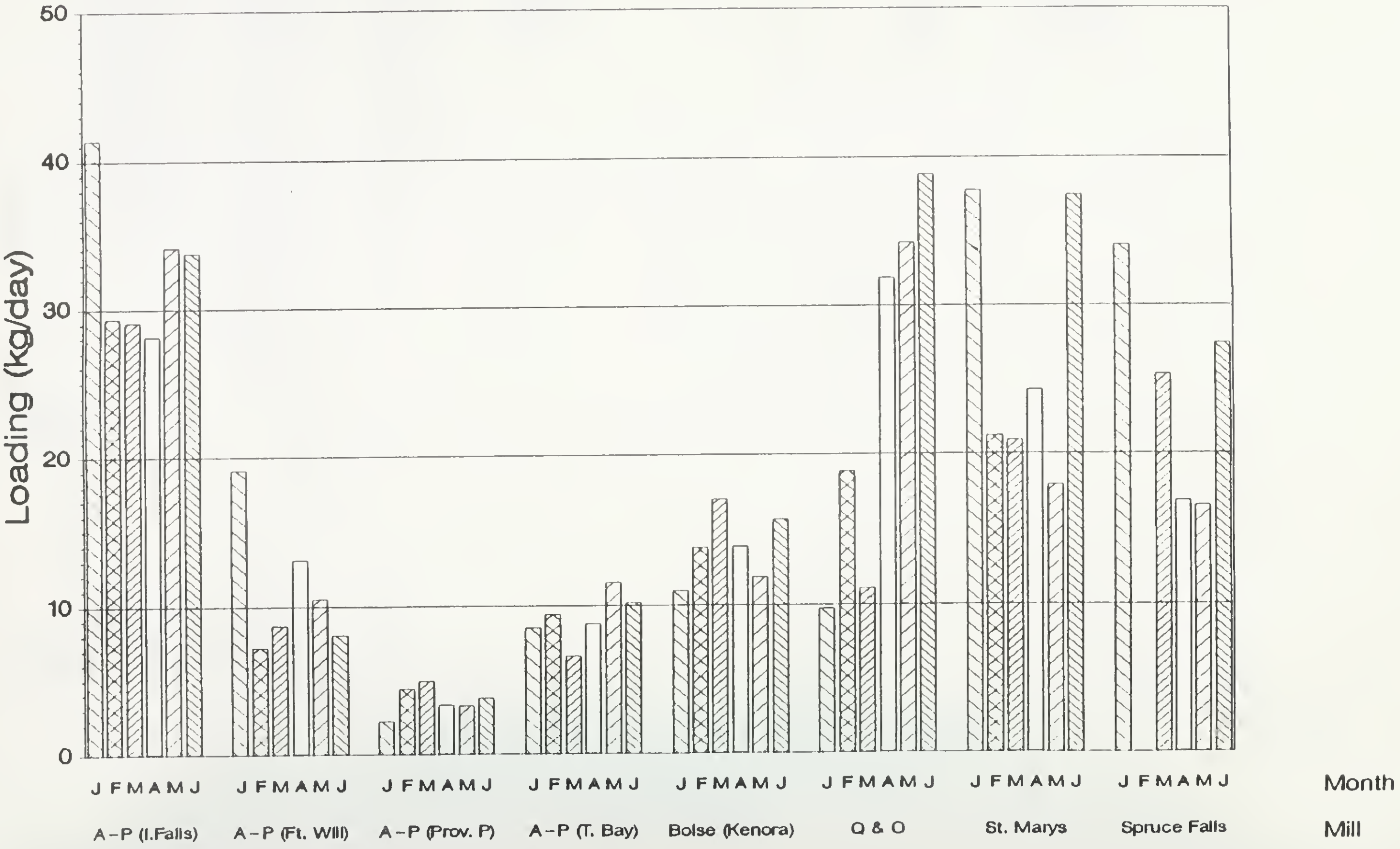


Figure 2.43
Corrugating Mill Process Effluent
Monthly Average Loading of Phosphorus

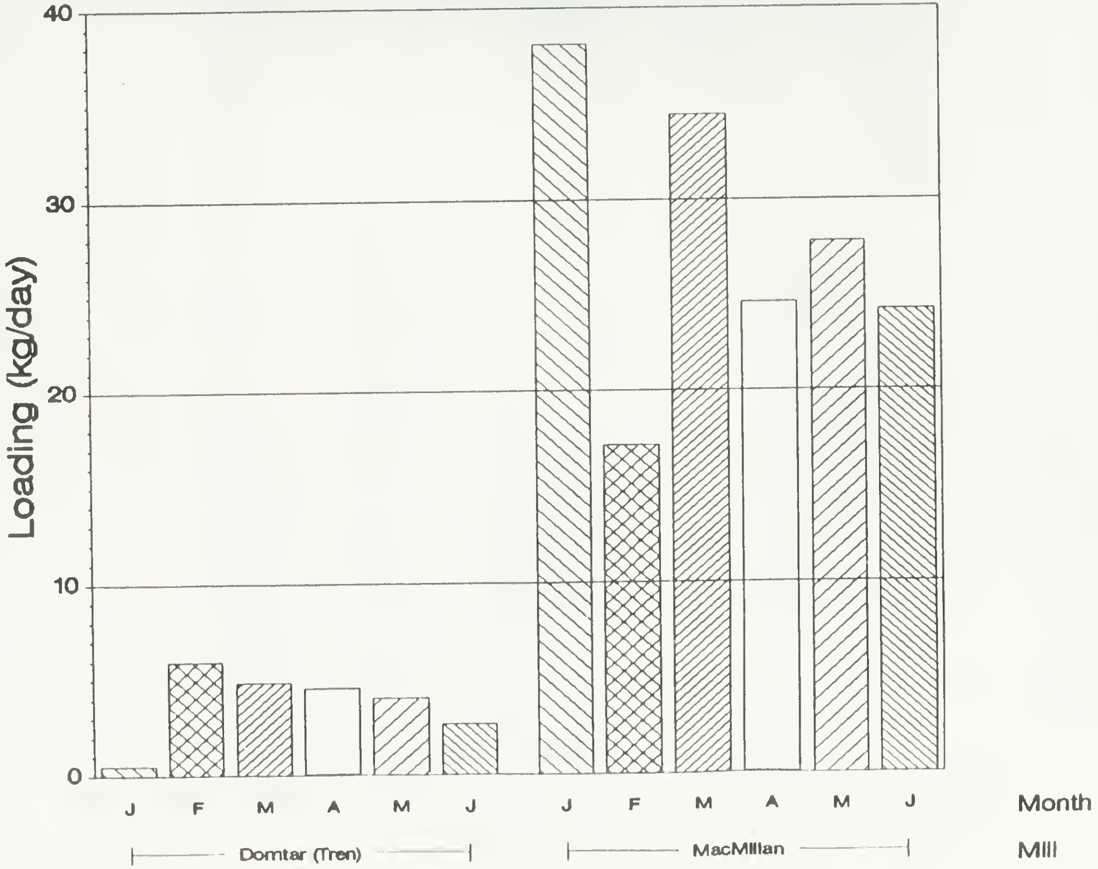


Figure 2.44
Deinking – Board – Fine Papers – Tissue Mill Process Effluent
Monthly Average Loading of Phosphorus

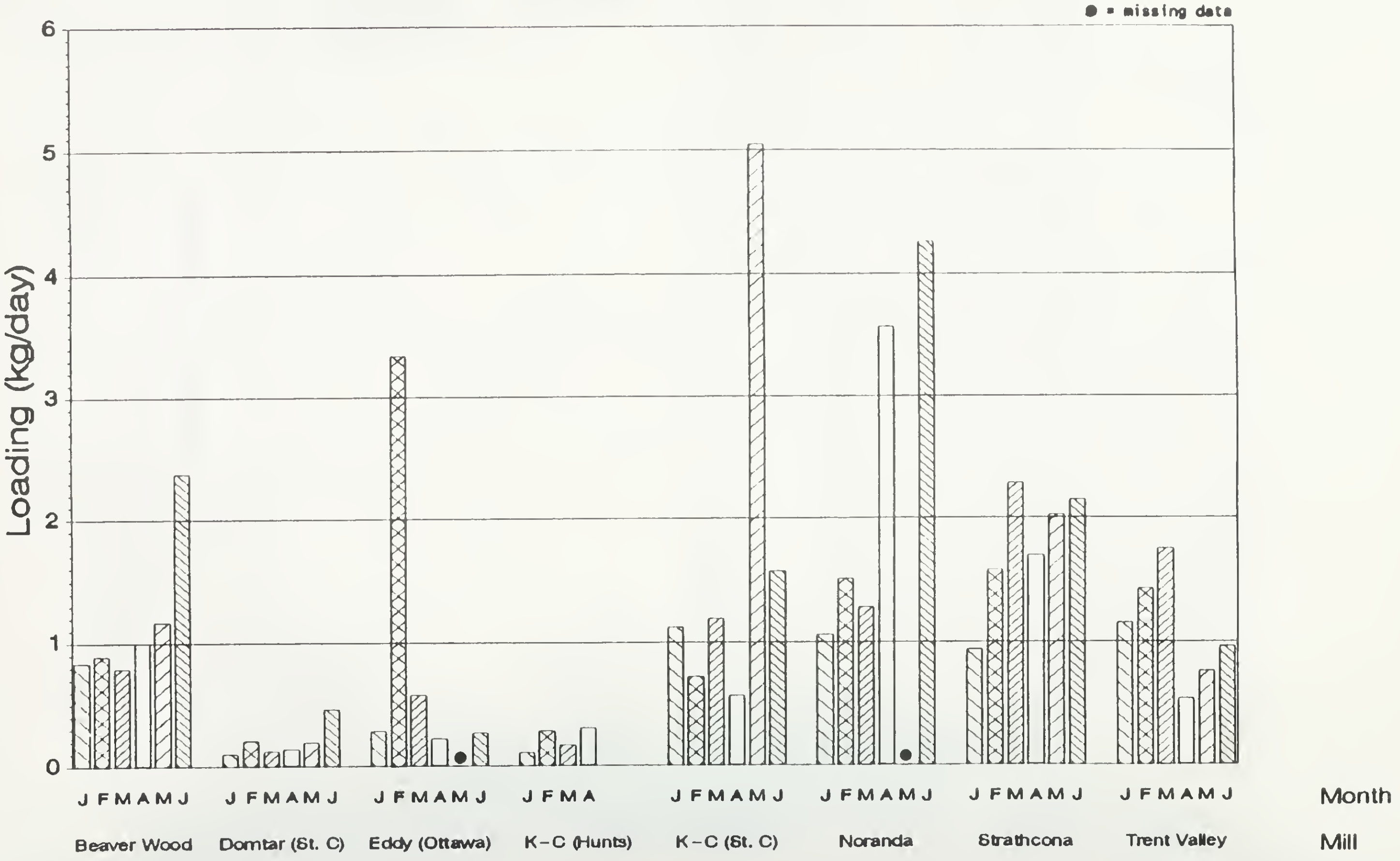


Figure 3.1

Sulphate (Kraft) Mill Process Effluent
Monthly Average Production Based Loading
of 5-Day Biological Oxygen Demand

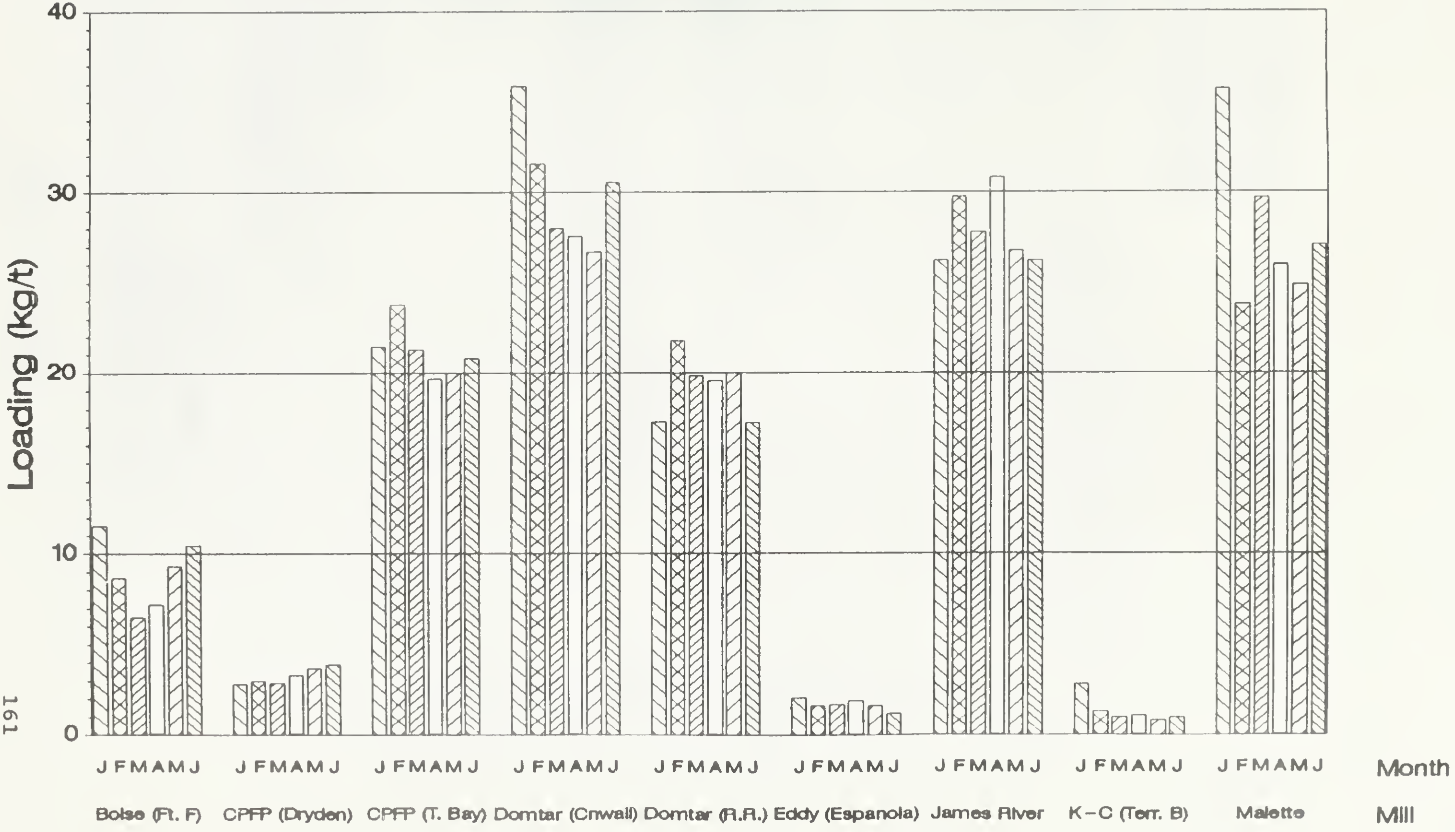


Figure 3.2
Sulphite – Mechanical Mill Process Effluent Monthly Average Production Based Loading of 5 – Day Biological Oxygen Demand

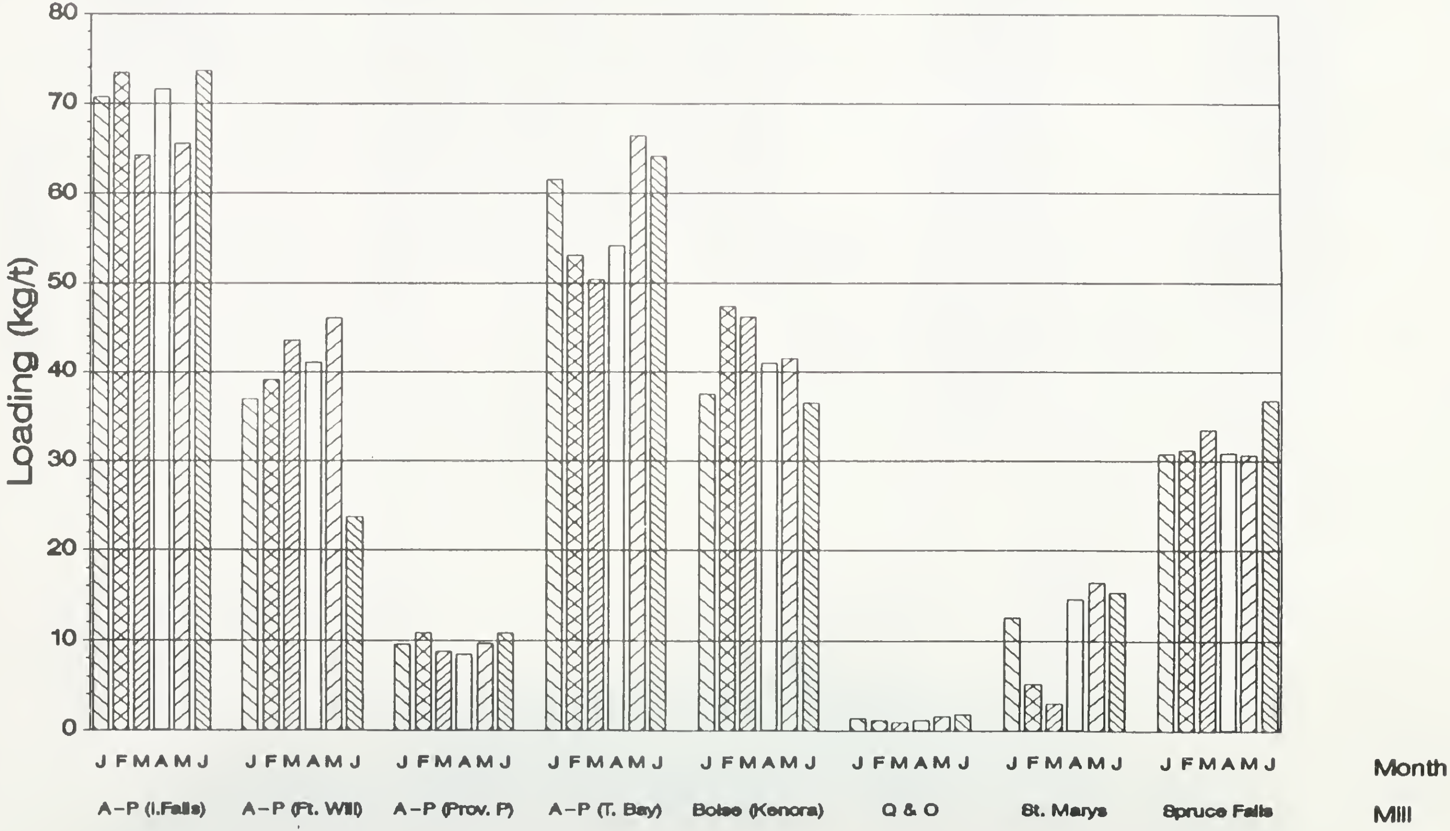


Figure 3.3
Corrugating Mill Process Effluent
Monthly Average Production Based Loading
of 5-Day Biological Oxygen Demand

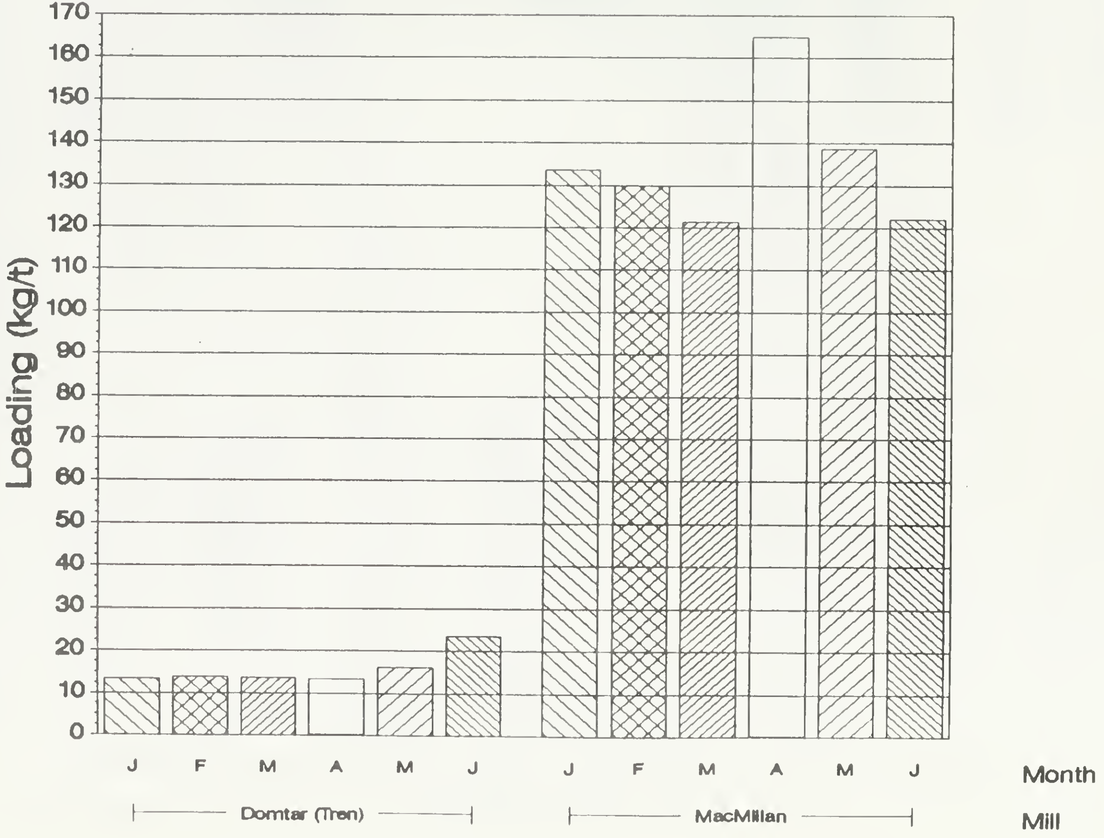


Figure 3.4

Deinking – Board – Fine Paper – Tissue Mill Process Effluent
Monthly Average Production Based Loading
of 5 – Day Biological Oxygen Demand

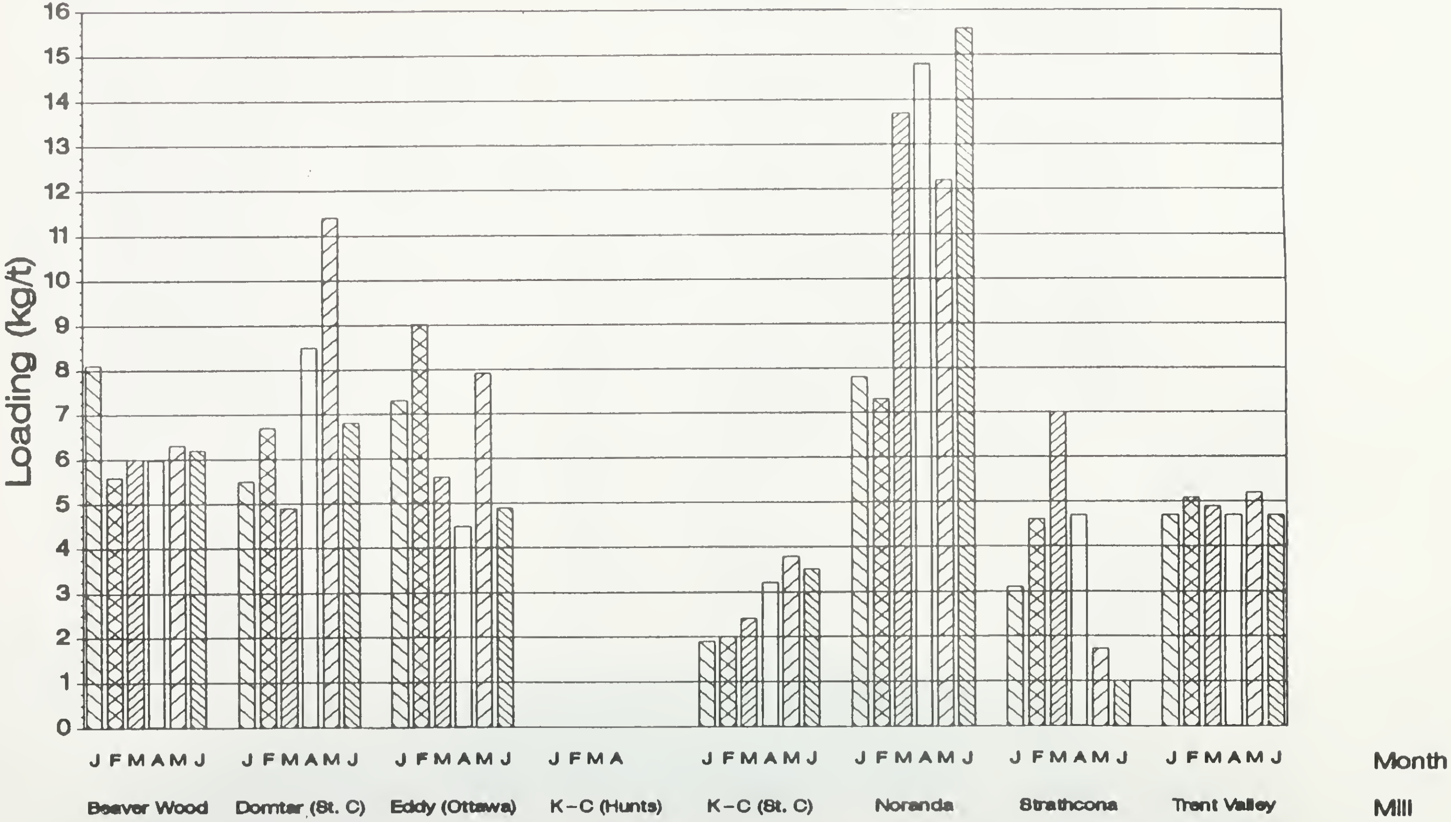


Figure 3.5

Sulphate (Kraft) Mill Process Effluent Monthly Average Production Based Loading of Total Suspended Solids

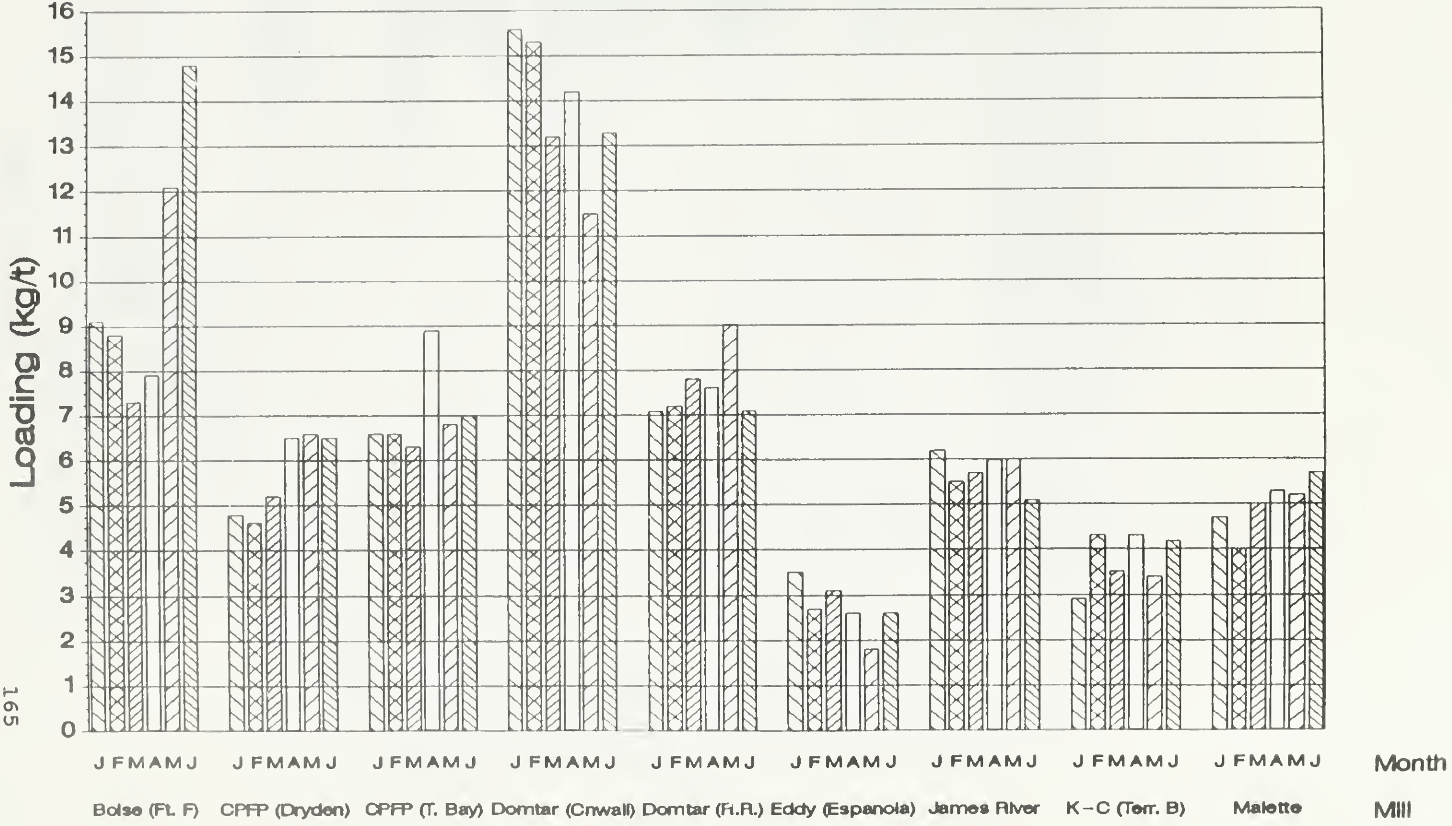


Figure 3.6
Sulphite – Mechanical Mill Process Effluent Monthly Average Production Based Loading of Total Suspended Solids

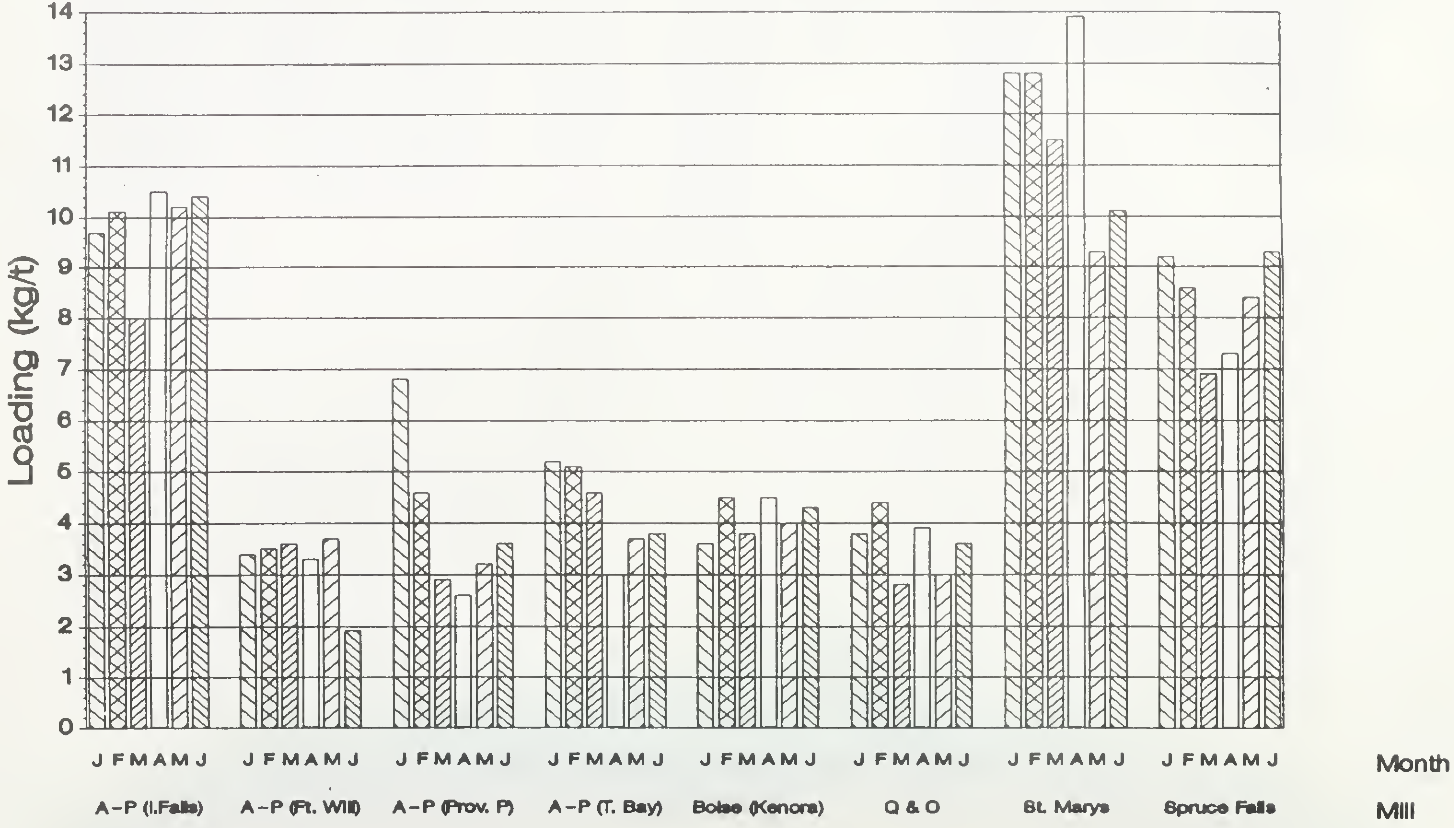


Figure 3.7
Corrugating Mill Process Effluent
Monthly Average Production Based Loading
of Total Suspended Solids

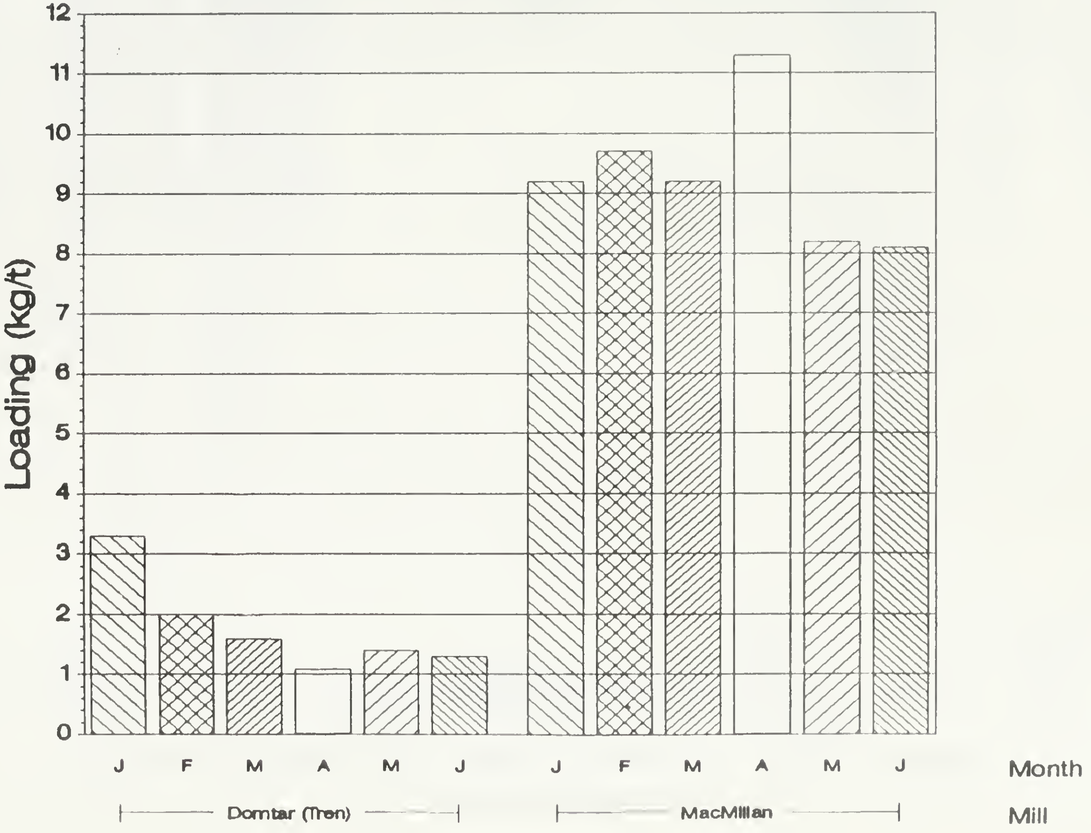


Figure 3.8
Deinking – Board – Fine Paper – Tissue Mill Process Effluent
Monthly Average Production Based Loading
of Total Suspended Solids

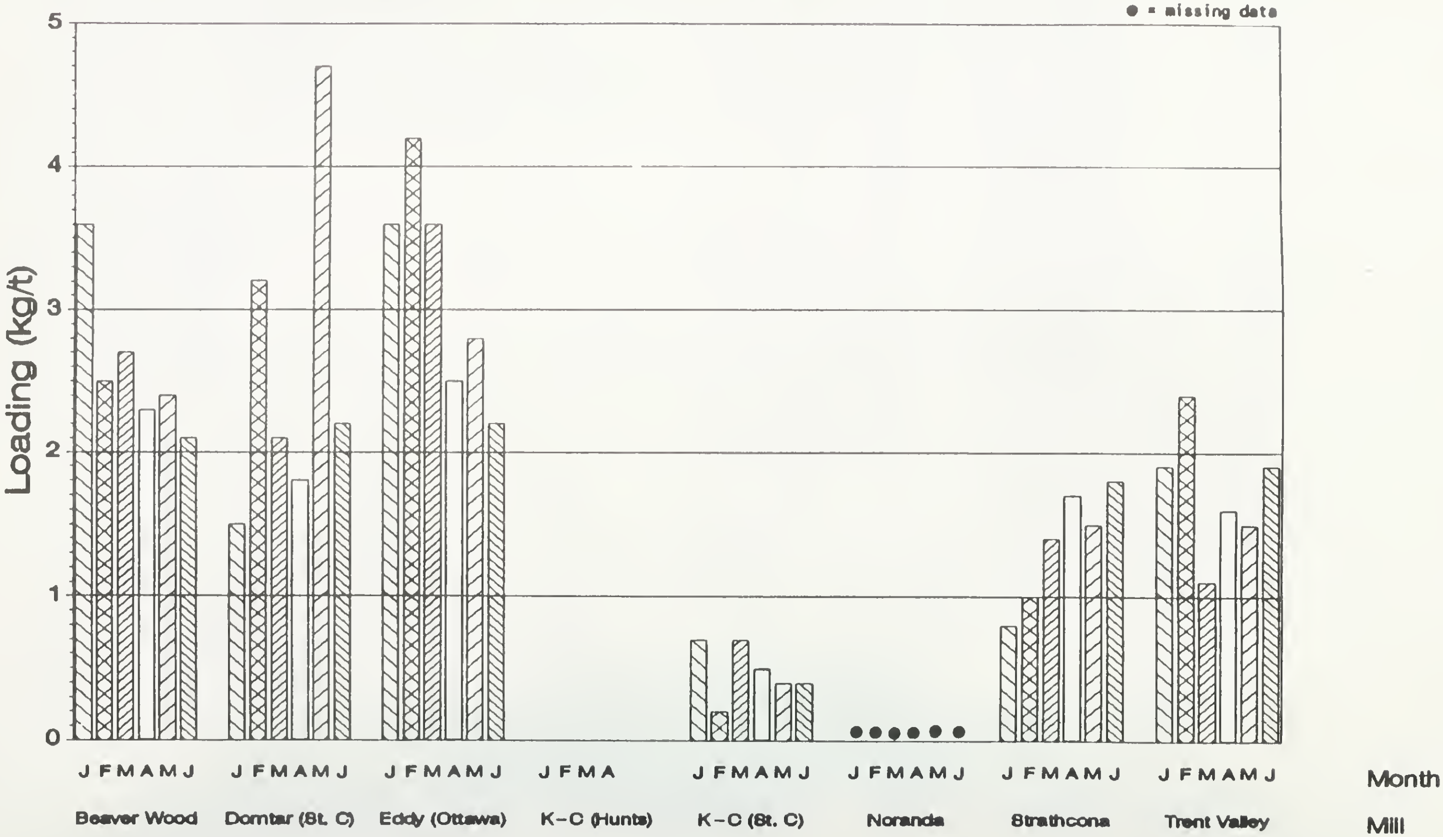
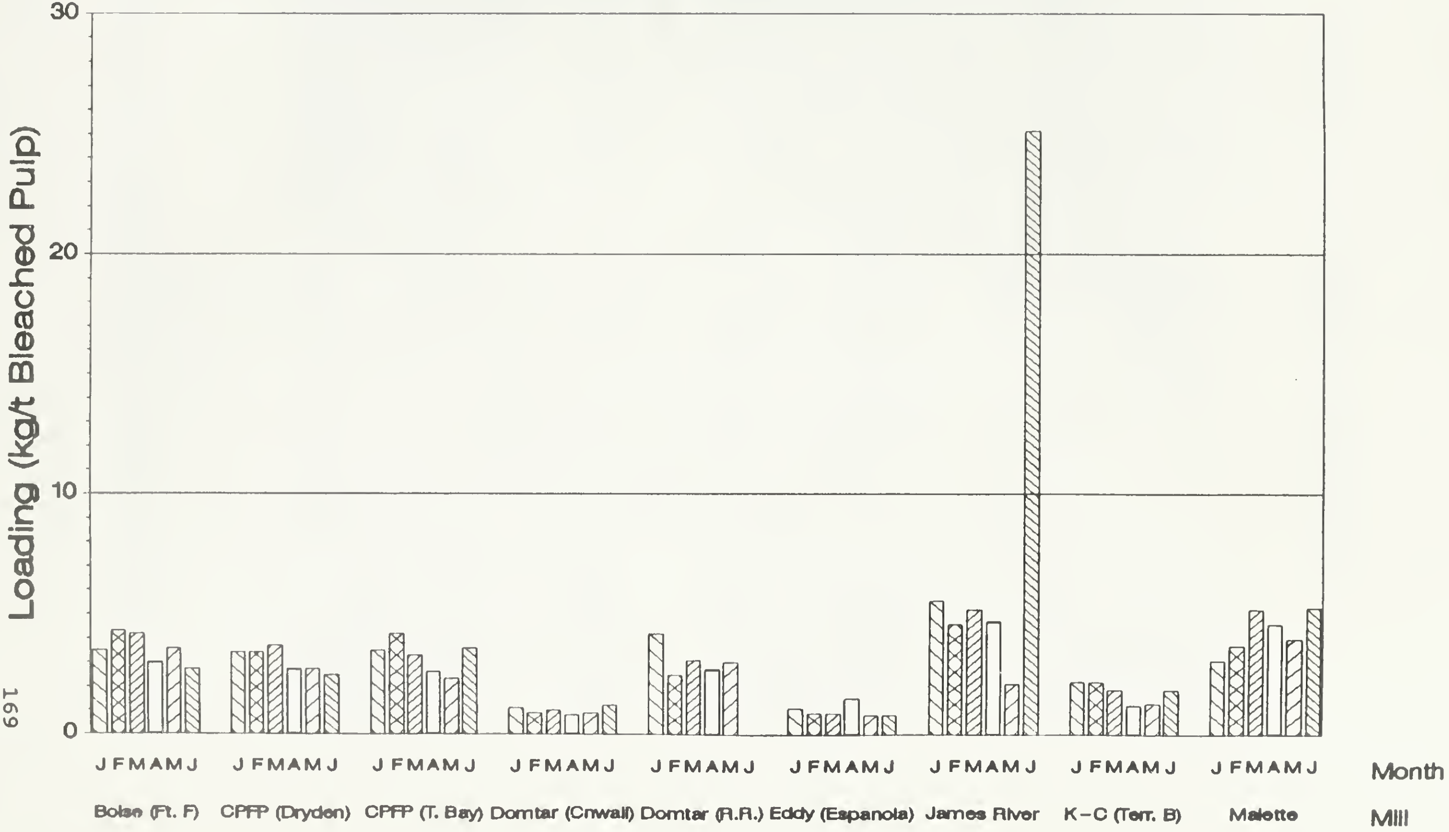


Figure 3.9
Sulphate (Kraft) Mill Process Effluent
Monthly Average Bleached Pulp Production Based Loading
of Adsorbable Organic Halide



APPENDIX A - MISA PULP AND PAPER SECTOR

SULPHATE (KRAFT) CATEGORY

Boise Cascade Canada Ltd.	Fort Frances
Canadian Pacific Forest Products Ltd.	Dryden
Canadian Pacific Forest Products Ltd.	Thunder Bay
Domtar Inc., Fine Papers Division	Cornwall
Domtar Inc., Containerboard Division	Red Rock
E.B. Eddy Forest Products Ltd.	Espanola
James River-Marathon Ltd.	Marathon
Kimberly-Clark Canada Inc.	Terrace Bay
Malette Kraft Pulp and Power Co.	Smooth Rock Falls

SULPHITE-MECHANICAL CATEGORY

Abitibi-Price Inc., Thunder Bay Division	Thunder Bay
Abitibi-Price Inc., Fort William Division	Thunder Bay
Abitibi-Price Inc., Provincial Papers Division	Thunder Bay
Abitibi-Price Inc., Iroquois Falls Division	Iroquois Falls
Boise Cascade Canada Ltd.	Kenora
Quebec & Ontario Paper Company Ltd.	Thorold
St. Marys Paper Inc.	Sault Ste. Marie
Spruce Falls Power and Paper Company Ltd.	Kapuskasing

CORRUGATING CATEGORY

Domtar Inc., Containerboard Division	Trenton
MacMillan Bloedel Ltd.	Sturgeon Falls

DEINKING-BOARD-FINE PAPERS-TISSUE CATEGORY

Beaver Wood Fibre Company Ltd.	Thorold
Domtar Inc., Fine Papers Division	St. Catharines
E.B. Eddy Forest Products Ltd.	Ottawa
Noranda Forest Inc., Recycled Papers	Thorold
Kimberly-Clark Canada Inc.	St. Catharines
Kimberly-Clark Canada Inc.	Huntsville
Trent Valley, **Paperboard Industries Corporation**	Trenton
Strathcona Paper Company	Napanee

* N.B.: List taken from The Development Document for the Effluent Monitoring Regulation for the Pulp and Paper Sector

APPENDIX B - REMARK CODES

REMARK CODE (PREMK)	DESCRIPTION
<	Actual amount less than reported
>	Actual amount probably greater than reported
A	Approximate value
<DL	Reported value = MDL: measured amt. MDL (non-zero)
<T	A measurable trace amount: interpret with caution
<W	No measurable response (zero): reported value
<WE	No measurable response (diln/concn): reported value
AR	Attached report
I	Interference suspected
IC	Interferenc: colour
IM	Interference: Sample Matrix
N/A (or !)	No data will be reported: see textual report
OLD	Old: sample exceeds maximum storage time
UQC	Data unreliable: possible lab QC problem(s)
!IN	No data: insufficient volume due to inspection
!NM	No effluent - no sample available
?	Late data: data not yet available: see text

APPENDIX C - UNITS OF MEASUREMENT

1 ng/L is approximately equal to 1 ppt (part per trillion)

1 ug/L is approximately equal to 1 ppb (part per billion)

1 mg/L is approximately equal to 1 ppm (part per million)

1 usiem/m = 10 umhos/cm